

**ASSESSMENT OF EFFECT OF APAMARGA
PRATISARANIYA KSHARA IN CERVICAL EROSION**

**A THESIS SUBMITTED TO THE
TILAK MAHARASHTRA VIDYAPEETH, PUNE**

**FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY (Ph.D.)
IN AYURVEDA - STREEROG PRASUTI TANTRA
Under the Board of Ayurveda Studies**



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ABBREVIATIONS

AYURVEDIC TEXTS:

✍ A.H. Ci	<i>Ashtanga Hridaya Chikitsa Sthana</i>
✍ A.H. Sa	<i>Ashtanga Hridaya Sarira Sthana</i>
✍ A.H. U	<i>Ashtanga Hridaya Uttara Tantra</i>
✍ A.H.Su.	<i>Ashtanga Hridya Sutra Sthana</i>
✍ A.S.Ci	<i>Ashtanga Samgraha Chikitsa Sthana</i>
✍ A.S.Su	<i>Ashtanga Samgraha Sutra Sthana</i>
✍ A.S.U.	<i>Ashtanga Samgraha Uttara Tantra</i>
✍ B.P.Ma.Kha	<i>Bhava Prakasha Madhyama Khanda</i>
✍ B.P.Ni.	<i>Bhava Prakasha Nighantu</i>
✍ Ca.Ci	<i>Charaka Samhita Chikitsa Sthana</i>
✍ Ca.Su.	<i>Charaka Samhita Sutra Sthana</i>
✍ Ca.Vi.	<i>Charaka Samhita Vimana Sthana</i>
✍ Ka.S.Khi.	<i>Kashya Samhita Khila Sthana</i>
✍ Dha.Ni.	<i>Dhanvantari Nighantu</i>
✍ Ma.Ni	<i>Madhava Nidana</i>
✍ Ma.Pa.Ni.	<i>Madana Pala Nighantu</i>
✍ R.Ni.	<i>Raja Nighantu</i>
✍ Sha.Sa	<i>Sarangadhara Samhita.</i>
✍ Su.U.	<i>Sushruta Samhita Uttara tantra</i>
✍ Su.Ci	<i>Sushruta Samhita Chikitsa sthana</i>
✍ Su.Ka.	<i>Sushruta Samhita Kalpa Sthana</i>
✍ Su.Sa.	<i>Sushruta Samhita Sareera Sthana</i>
✍ Su.Su.	<i>Sushruta Samhita Sutra Sthana</i>
✍ Y.R	<i>Yoga Ratnakara</i>

STATISTICAL TERMS:

✍ NS	Not significant ($p > 0.05$).
✍ S	Significant ($p < 0.05$).
✍ VS	Very significant ($p < 0.001$).
✍ ES	Extremely significant ($p < 0.0001$).
✍ BT	Before treatment.
✍ AT	After treatment.
✍ SD $\pm$	Standard deviation.
✍ SE $\pm$	Standard error.
✍ p	'p' value.
✍ T	Unpaired or paired 't' test.
✍ W	Wilcoxon matched-pairs signed-rank test.
✍ U Stat.	Manwitney test

INTRODUCTION

Ayurveda is not only the oldest system of medicine in India, but it claims to be the first systemic science ever evolved throughout the World. It has been serving to remove sufferings and miseries of the mankind since time immemorial. It prolongs life span, maintains positive health and cures diseases¹.

The science of *Ayurveda* has evolved into eight branches and *Kaumarabhritya* (Paediatrics) is one among them. The subject matter of *Prasuti* and *Stri Roga* has been described under *Kaumarabhritya* by the *Acharyas*².

Further the diseases of *Stri* has been mentioned under the chapter of *Yonivyapad*³ and described in detail each disease along with its signs and symptoms and these can be considered as the diseases of reproductive system. In this, Functional disorders are considered under *Asrugdara* and remaining *Vrana*, *Arbuda* and *Granthi* etc. disorders are similar to other body parts.

The disease of cervical erosion is a common Gynecological problem encountered in day to day clinical practice. It is a condition where ectocervix is covered by Columnar epithelium, that means natural Squamous epithelium is later replaced by Columnar epithelium³ and appears like a *Karnikara granthi*⁴ or *Vrana* depending upon the chronicity.

According to some scientific reports majority of women suffering from the cervical erosion i.e. benign condition of female genital tract during their life time. A cross-sectional study reported by Kulkarni et.al (2002)⁵ that 357 females in the reproductive age group (15-44) was conducted in an urban community of Nagpur, with an objective to study relation between socio-economic factors and cervical erosion. Around 75 percent of women with inflammatory smears of cervical erosion was found. The study further reported that cervical erosion was more common in illiterate women having low literacy status as compared to women with higher education. In general, Clinically it appears with white discharge per vagina, low-back pain, local irritation, irregular spotting P/V on chronic stage. Though it is a benign disease, but may turn in to malignant in some women. This clinical entity can be compared with two conditions as described in *Ayurveda* viz., *Karnini Yonivyapad* and *Garbhashayagata Dushtavrana*.

Usually it is treated with Diathermy cauterization, Cryosurgery and by other local measures⁶. But these treatments are associated with mild to moderate complications such as cramping pain, profuse vaginal discharge, spotting, cervical stenosis, cervical incompetence etc. Sometimes need repeated sittings for the treatment. Most of these are invasive in nature. Hence there is a need to develop treatment that works like cauterization and which is minimal invasive in nature, without much complications. In *Ayurveda Agnikarma* and *Ksharakarma* like parasurgical procedure are described to treat the *Vrana* conditions⁷. These therapies are having *Vranahara*, *Shodhana* and *Ropana* properties with minimal or no complications.

NEED OF THE STUDY

The condition of cervical erosion / *Karnini* is commonly treated with invasive therapies such as electric cauterization, cryosurgery etc., and also with some topical applications in the Allopathic system of medicine. But treatment with these therapies are not providing satisfactory results in curing the cervical erosion, repeated episodes of application of these therapies are may be necessary in some cases and most of the times lead to side effects such as profuse vaginal discharges, irritation etc. These conditions if not treated results into cervical intraepithelial neoplasia⁸, cervical stenosis etc. on long run. Hence there is a high need to develop an accurate, safe and economic therapy for cervical erosion.

Ksharakarma is considered *Shreshta* (superior most) among the *Shastra karma* and *Anushastra karma* (Surgical and Para-surgical procedures). It is having *Chedya* (excision), *Bhedya* (Incision) and *Lekhya* (Scarification) properties. It does both *Shodhana* (Cleansing / Debridement) as well as *Ropana* (Wound Healing) karma and are *Tridosha shamaka*.⁹ In *Susruta samhita*, *Pratisaraniya Kshara* is indicated in *Dushta vrana* (Non healing wounds or ulcers) having *Utsanna mamsa* (Raised granulation tissue), *Kathina* (Hard), *Kanduyukta* (With itching), *Chirothitha* (Chronic) and *Dusshodhya* (Difficult in cleansing and debridement).¹⁰

Here as cervical tissue is a soft tissue; *Mridu Kshara* was selected for the *Kshara Karma*. *Apamarga Mridu Kshara*, having *Kanduhara* and *Vishahara* properties, was selected as the drug *Apamarga* is easily available and non

controversial Even though considerable number of studies had already carried out with *Apamarga Mridu Kshara*, but those studies are carried out on small sample size.

Keeping the above view in mind, the present study has been planned to work on “Assessment of effect of *Apamarga Pratisaraniya Kshara* in Cervical erosion” with the following aim:

- To evaluate and compare the effect of *Apamarga Pratisaraniya Mridu Kshara* and Electric cauterization in Cervical Erosion (*Karnini*).

The above mentioned formulation *Apamarga Pratisaraniya Mridu Kshara* was prepared in the laboratory of Department of *Rasashastra*, National Institute of Ayurveda and subjected to Physico-Chemical Analysis.

As said previously to evaluate its efficacy in *Karnini* / cervical erosion a clinical study has also been conducted between *Apamarga Pratisaraniya Mridu Kshara* and Electric cauterization on 200 patients as a part of thesis work.

The study of thesis matter has been divided into following parts:

1. **Literary Review:** The *Ayurvedic* literary review deals with the literary survey on *Karnini* / Cervical erosion from ancient to present available texts and also mentioned concept on *Kshara karma* and *Agni karma*.
2. **Modern Review:** The modern review deals with the disease Cervical erosion along with its management including Cryosurgery and Electric cautery etc.
3. **The Drug Review:** The drug review deals about constituent of *Apamarga Pratisaraniya Mridu Kshara* along with drugs used for douching purpose and their individual drug description. The pharmaceutical process of *Apamarga Pratisaraniya Mridu Kshara* and its Analysis are also mentioned here.
4. **Research Methodology:** In this study, the prepared Medicine and Electric cauterization as control are evaluated for their efficacy in *Karnini* / Cervical erosion.
5. **Observations and Results:** The treatment modus and its observations along with results are mentioned in detail.
6. **Discussion:** This chapter contains, the whole work of the thesis has been discussed in detail.

7. **Conclusion:** This chapter deals with the conclusion of the whole thesis work.
8. **Bibliography:** This chapter contains information of various books referred for the thesis.
9. **Appendices:** The entire appendix such as consent form, Reports and Articles etc, are attached.

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REVIEW OF DISEASE – AYURVEDA

INTRODUCTION

The clinical condition of the disease *Karnini* is resembles with Cervical Erosion of modern medicine. The synonyms of the disease *Karnini* are *Karnika* and *Karnini* i.e. a swelling appears at Cervix which is in ear shaped knot and the disease was mentioned under *Yonivyapad*. It is also considered as a disease of the reproductive tract, As per the description of a the *Acharya Charaka* the disease is caused by *dushitaVata*, *Kapha* and *Rakta dosha*¹ whereas as per *Susrutha* it is caused by *Kapha* and *Rakta*² i.e. there is no role of vitiated *Vata* in producing the disease according to *Susrutha*. It is high time that there is requirement of evaluation of the disease according to its *dosha-dushya sammurchana* for exactly knowing its etiopathogenesis.

The probable mechanism of origin of disease according to classics is ‘due to untimely bearing down efforts foetus conceals the path of *Vayu* and this in turn obstruction caused augmentation of *Kapha* as well as *Rakta* and results into ear like projection or *mamsakanda* / *mamsankura* formation and termed as *Karnika*³. Overall, it can be termed as a disease of *Mamsakandi*⁴ or *Mamsankura*⁵ or *Mamsakandakargranthi*⁶ similar to petal of lotus. Here, the *mamsa* refers fleshy or muscular tissue origin; the word *Kandi* refers different meanings such as a bulbous or a tuberos form, a lump, a swelling knot at cervical orifice.

कर्णिकामितिकर्णिकाकारग्रन्थिम् (Ca. S. Ci. - 30/27 *Chakrapani*)

कर्णिकामांसकन्दी। (Su. S. U. - 38/15-17 *Dalhana*)

कर्णिकापद्मकर्णिकातुल्यमांसाङ्कुरमित्यर्थः। (A.S.U. 38/51-*Indu*)

कर्णिन्यांकर्णिकेतिकर्णिकामांसकन्दाकारग्रन्थिः। (M. Ni - 62/8-10 *Madhukosh*)

मांसस्य कर्णिकाऽऽकारो ग्रन्थिः।

(B. P. *Yoniroga Chikitsa* ,*Madhyama khanda* 70/11)

Appearance of *mamsakandakara granthi* leads to comparison with *musculat* protuberance in the cervix and if we consider it as *karnika* i.e. lotus petal then it is near to the diagnosis of cervical erosion. Though some people consider it as the cervical or uterine polyp, but when we evaluate the *nidana* factor of *Karnini*, then this condition appears more relevant to cervical erosion.

Anatomical origin:

According to *Ashtanga Sangraha*, the site is described as ‘*Yonau*’, that means inside the *yon*i (vaginal canal), and commentator *Indu* further clarified it as *Garabhashaya dvara mukha* (cervical orifice)⁷.

योनौगर्भाशयद्वारमुखे.....।

(A.S.U. 38/51-Indu)

Classification of *Karnini* according to *dosha*:

According to *Sushruta*⁸, *Madhavakara*⁹, *Bhavaprakasha*¹⁰, *YogaRatnakara*¹¹, the disease *Karnini* was classified under *Kaphaja* predominant *yonivyapad*.

अत्यानन्दाचयायोनिःकर्णिनीचरणाद्वयम् ।

श्लेष्मलाचकफाज्जेया, षण्डाख्याफलिनीतथा ॥

(Su. U. - 38/8)

Aetiology:

अकालेवाहमानायागर्भेणपिहितोऽनिलः।

कर्णिकांजनयेद्योनौश्लेष्मरक्तेनमूर्च्छितः॥२७॥

रक्तमार्गावरोधिन्यासातयाकर्णिनीमता॥२८॥

(Ca.S.Ci. - 30/27-28)

अकालेवाहमानायाइत्यादिअप्राप्तेगर्भनिष्क्रमणकालेप्रवाहणंकुर्वन्त्याः॥(Ca.S.Ci. - 30/27-28)

कर्णिन्यांकर्णिकायोनिश्लेष्मासृग्भ्यंप्रजायते॥

(Su.U. - 38/15)

चतसृष्वपिचाद्यासुश्लेष्मलिङ्गोच्छ्रितिर्भवेत्॥

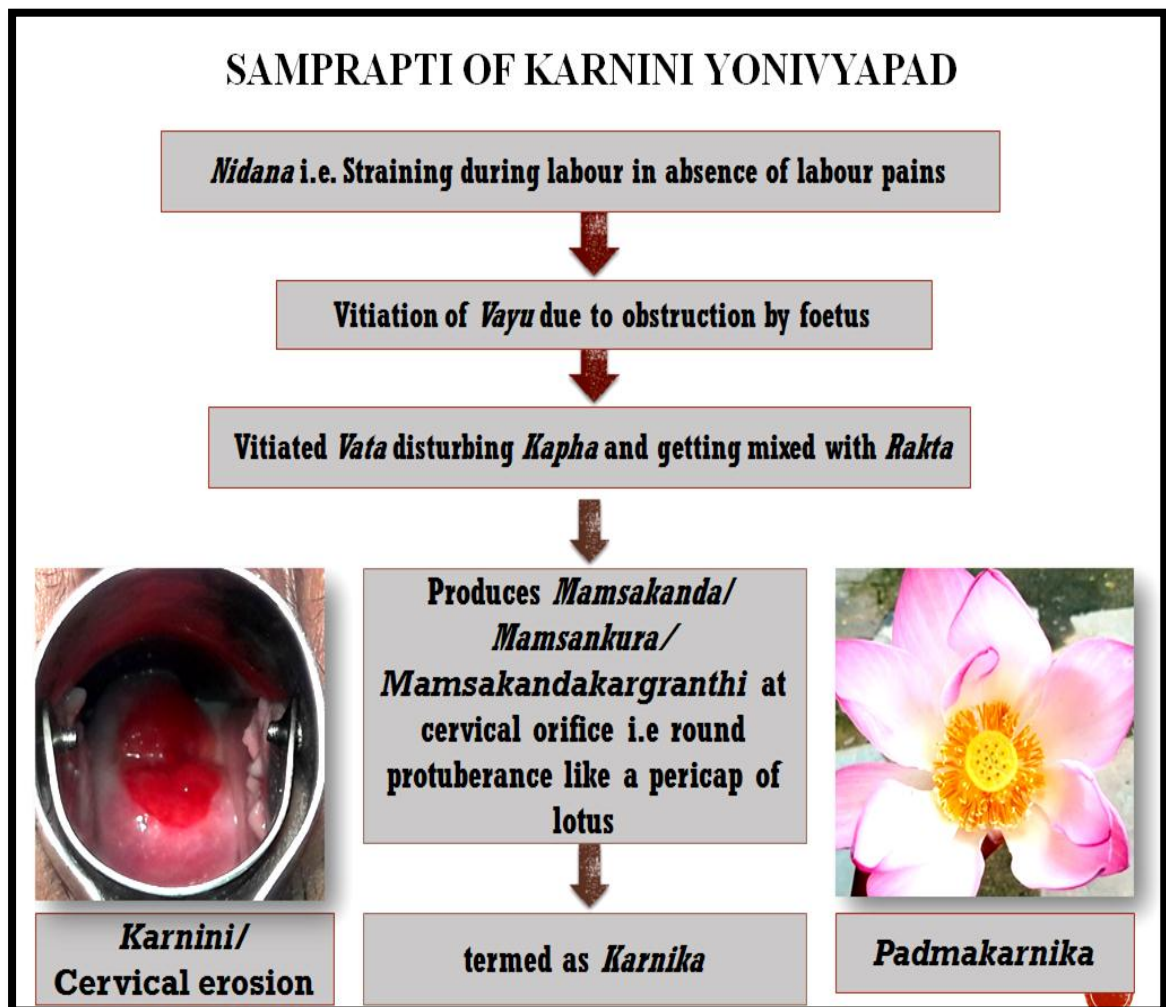
(Su. U. - 38/17)

श्लेष्मलिङ्गोच्छ्रितिःपैच्छिल्यकण्डवादिकाः॥ (Dalhana on Su. U. - 38/15-17)

Aetiology of the disease *Karnini* as described by *Charaka* is *akala vahana*. *Acharya Cakrapani* given explanation on *akalavahana* and said that *akala vahana* done during *Garbha nishnkramana kala* i.e. during birth of fetus¹². In this context, the term *akala* denotes before the correct time and *vahana* term indicates bearing down.

In *Ayurveda* there is a concept of *vega dharana* and *vega udirana*, certain urges described to discharge on feeling of sense of the urges (*Adharaniya vega*) and certain *vegas* are suggested to withhold when they are ready to onset (*Dharaniya vega*). It is also suggested that not to discharge the *dharaniya vega* before their sense of urge. One among such instructions are also given in the context of *Garbha nishkramana* or *Prasavakala* that in the absence of *avi* (strong uterine contractions) not to bear down the fetus (*vahana*). In the context of *KarniniYonivyapad*, *akala vahana* is explained as aetiology of onset of *Karnini*. *Vegaudirana* of *adharaniya vega* leads to the vitiation of *Vayu* and in *Karnini* this vitiated *Vayu*, withholds the *Kapha* and forms the *Karnika* shaped *granthi*.

FLOW CHART OF PATHOGENESIS OF KARNINI YONIVYAPAD



The abnormal or vitiated *Vayu* withholds *kapha* and mixed with *rakta* causes the formation of *Mamsakanda* or *mamsankura*. The *Vayu* vitiated by above reasons functions in abnormal way, initiates abnormal changes in the cell growth, perhaps through altering the growth factors or neuro-humours necessary for maintaining the normal growth of the cell in the uterus and cervix.

Clinical features:

Appearance of *mamsa kanda* or *mamsankura* at the site of *Garbhashaya greeva mukha*. The associated features found in *Karnini yonivyapad* are feeling of *picchilata* (stickiness) and *kandu* due to vitiation of *Kapha*¹³.

Karnini Complications:

रजोमार्गनिरोधिनीर्गर्भाशयद्वारसंवृत्तिकरी। अतएवनिषिक्तस्यशुक्रस्याप्रतिग्रहाद्गर्भोनजायतइतिभावः।

(A.S.U. 38/51-Indu)

Due to presence of *Karnini* there may be obstruction of *path* of menstrual blood and narrowing of Cervical orifice¹⁴.

Management *KarniniYonivyapad* :

1. *Shodhana* therapy: *Uttaravasti* with *Jivaniya dravya sadhita taila* was found mentioned¹⁵.

Vaginal application – Application of *Varti* prepared with *Kushta*, *Pippali* and Tender leaves of *Arka* and rock-salt and *bhavana* with goat's urine¹⁶.

2. Advised *Kapha nashaka* remedies¹⁷.
3. Application of *Yoni Varti* prepared with *Shodhana dravyas*¹⁸

Pathya :

1. *Sura* (wine), *Asava* and *Arishta*, *Lashuna* juice, advised in the morning according to the *dosha* predominance¹⁹.
2. Diet abundant with milk and *mamsarasa* (meatsoup)²⁰.
3. *Yavanna bhojana* (barley diet)²¹.
4. *Abhayarishta*, *Sidhu*, *Taila*, *Pippali churna*, *Loha bhasma*, *Pathya churna* with *madhu*²²

Apathya – Non-congenial:

1. *Manda* (Scum of boiled rice)²³.

Table No:1 Showing as per the legendary professor Premvati Tewari, points of congruence between *Karnini Yonivyapad* and Cervical erosion are: ²⁴

Factor	<i>Karnini Yonivyapad</i>	Cervical Erosion
Site of origin	<i>Garbhashaya greevamukha</i>	Cervix
Appearance on naked eye examination	<i>Karnika</i> means pericarp of lotus	Elevated and granular appearance of cervix due to erosion, and presence of nabothian follicles gives appearance of pericarp of Lotus
Colour	Due to association with <i>rakta</i> and <i>kapha</i> , <i>Garbhashayagreeva</i> appears red in colour; sometimes blood stained discharge might be present	Cervix is bright red in colour, often covered with thick white mucous, blood stained discharges may be present
<i>Nidana</i>	<i>Mithyachara</i> - Over straining during labour in the absence of labour pains is the main cause	It often occurs in postnatal period, because at the time of healing of cervical ulcers, caused due to straining during labour, the columnar epithelium of endocervix advances and replaces squamous epithelium of portio-vaginal portion of cervix.
	<i>Mithyavihara</i> (abnormal mode of life such as excessive coitus leading to hyperemia, ulceration and infection)	Hyperemia due to excessive coitus infection and hyperoestrogenic condition are the causative factors
	<i>Pradushta artarva</i> (hormonal imbalance)	Hormonal imbalance (rise in estrogen level) is one of the cause
	<i>Bija dosha</i> (Congenital)	Congenital erosion also occurs.

Pathogenesis	Vitiation of <i>vata</i> and <i>kapha</i> with holding <i>rakta</i> produces <i>karnika</i> at <i>yoni</i> (on cervix).	Stratified squamous epithellium is replaced by columnar epithelium at ectocervix.
Associated symptoms	Due to vitiation of <i>kapha</i> , unctuousness, excessive mucoid discharge and itching are present	• Mucoid discharge per vagina • Pruritus vulvae • Backache • Lower abdominal pain • Generalized weakness
Complications	Produces narrowing of cervical os and infertility due to non acceptance of <i>Sukra</i> (sperms)	Due to congestion and edema, the os may be narrowed. Excreted thick mucus hinders the entry of sperms resulting into infertility.
Treatment basis	<i>Shodhana varti</i> , <i>pichu</i> , <i>uttara basti</i> and <i>kaphahara chikitsa</i> , including <i>lekhana</i> , <i>shodhana</i> , <i>ropana</i> are main treatment	Cauterization is the main treatment

Critical analysis:

In *Karnini yonivyapad* formation of *karnikakara granthi* is seen, i.e. growth like lotus petal shape in the *grabhashaya greeva* i.e. cervix uteri. *Karnika* is lotus petal and lotus petal appears red or pinkish red. Clinically reddish pink or pink coloured growth or discolouration is seen in cases of cervical erosion. So *Karnini* condition can be compared with early stages of cervical erosion. Features of chronicity like excessive discharges, low-back pain etc., are not described for this condition. Based on the etiology and clinical features *Karnini* is the ectropion or Cervical erosion that occurs after delivery.

When cervical erosion becomes chronic features like excessive vaginal discharges, pain abdomen, low-back pain etc., are seen. At this juncture cervix uteri

appears invaded with *vrana*. *Garbhashaya Greevagata Vrana* is the chronic stage of cervical erosion that occurs due to chronic infections etc. *Acharya Sushruta* and *Vagbhata* are well described about *Vrana* features along with its detailed management. *Yonivrana* is mentioned in the context of *Yonivranekshana yantra* in *Ashtanga Sangraha*²⁵.

The above statement indicates that *Vrana* occurs in the vagina and vaginal part of cervix. Further it can be described logically that, the shape of *yonivranekshana yantra* is like closed lotus flower. When this instrument is kept open it allows the visualization of the cervix, instead of vaginal walls. Thus, this context gives the idea of *Yonigata vrana* that present inside the vaginal canal means vaginal part of the cervix uteri i.e. the description of *Garbhashaya Greevagata Vrana*. Hence, a detailed related to *Vrana* are also mentioned.

DEFINITION OF VRANA:

That which causes damage or discoloration is called *Vrana*. Based on this description cervical erosion can be considered as *Vrana*. Eight *Vranavastu* (Base material for ulcers) are described and *mamsa* is one among them²⁶.

त्वङ्मांससिरास्नाय्वस्थिसन्धिकोष्ठमर्माणीत्यष्टौव्रणवस्तूनि । (Su. Su. 22/3)

Two muscles are present at *Garbhashaya Greeva* (cervix uteri). While describing the extra muscles of women, two muscles are described to present inside of the *Garbhashaya Marga*, by the *Sushruta*²⁷.

स्त्रीणांतुविंशतिरधिका दशतासांस्तनयोरेकैकस्मिन्पञ्चपञ्चेति, यौवनेतासांपरिवृद्धिः;
अपत्यपथेचतस्रः-तासांप्रसूतेअभ्यन्तरतोद्वे, मुखाश्रितेबाहयेचवृत्तेद्वे, गर्भच्छिद्रसंश्रितास्तिस्रः,
शुक्रार्तवप्रवेशिन्यस्तिस्रएव । पित्तपक्वाशययोर्मध्येगर्भशय्या, यत्रगर्भस्तिष्ठति ।। (Su. Sa. 5/39)

In this description four muscles in vaginal tract are mentioned, of which two are spread inside while the other two are round and situated externally at the opening²⁸

अपत्यपथेयोनौचतस्रः । चतसृणामेवविवरणमाह-तासामित्यादि । मुखाश्रितेयोनिमुखाश्रिते ।
अभ्यन्तरतःप्रसूतेइतियोनेरभ्यन्तरतःप्रसारंप्राप्तेमूत्रस्रोतःस्वरूपेइत्यर्थः । बाहयेनिर्गते, वृत्तेवर्तुले,
योनिकर्णिकास्रोतःपार्श्वद्वयगतत्वेनद्वेमांसपेश्यौ । गर्भच्छिद्रसंश्रिताइतिगर्भमार्गमाश्रितास्तिस्रः आवर्तत्रयरूपेण,
तृतीयेचावर्तमत्स्यमुखाकारागर्भशय्या (यत्रगर्भस्तिष्ठति, तासांशुक्रार्तवप्रवेशिन्यश्चतिस्रःपेश्यः ।।

(Dalhana on Su. Sa. 5/39)

Hence *Vrana* on the *Garbhashaya Mukha* can be considered as *Mamsashrita Vrana* and it is having *Vrittakara* (circular) shape and hence is described as Curable²⁹.

तत्रायतश्चतुरस्रोवृत्तस्त्रिपुटकइतिव्रणाकृतिसमासः, शेषास्तुविकृताकृतयोदुरुपक्रमाभवन्ति ।।

(Su. Su. 22/5)

Cervical erosion on the cervix uteri usually appears circular in shape. Sometimes it can be compared with *Dushtavrana* (vitiated ulcer) when it becomes chronic based on the clinical features like - too narrow, too wide, too hard, too soft, elevated, depressed, too cold, too hot, having any one of the following colors- black, red, yellow, white etc., frightful, full of pus, muscles, vessels, ligaments etc., discharging pus, moving in oblique track, having deep base, with ugly sight and foul smell, severely painful; associated with heat, suppuration, redness, itching, swelling and boils; excessively discharging vitiated blood and long standing- these are the features of vitiated ulcer.

तत्रातिसंवृतोऽतिविवृतोऽतिकठिनोऽतिमृदुस्त्सन्नोऽवसन्नोऽतिशीतोऽत्युष्णः नगन्धात्यर्थदाहपाकराग वेदनावानितिपित्तेन, शेषाः कफेन; उन्मार्गोमुखात्मुखान्तरवान्, उत्सङ्गः कोटरः इतिचक्रः; कृष्णरक्तपीतशुक्लादीनां वर्णानामन्यतमवर्णोभैरवः पूतिपूयमांससिरास्नायुप्रभृतिभिः पूर्णः पूतिपूयासाव्युन्मार्ग्युत्सङ्गमनोज्ञदर्शनगन्धोऽत्यर्थवेदनावान्दाहपाकरागकण्डूशोफपिडकोपद्रुतोऽत्यर्थदुष्टशोणितसावीदीर्घकालानुबन्धीचेतिदुष्टव्रणलिङ्गानि । तस्यदोषोच्छ्रायेणषट्त्वंविभज्ययथास्वंप्रतीकारेप्रयतेत ।। (Su. Su. 22/7)

These are too differentiated into six according to predominance of *Dosha* and treatment is to be given accordingly³⁰

Vrana appears too narrow due to the involvement of *Vata*, becomes too wide because of *Pitta*, excessive hardness due to *Vata*, excessive softness due to *Kapha*. Elevation of *Vrana* or depression occurs due to the involvement of *Rakta-Pitta*, However others consider it as due to *Vata*; some consider elevation due to *Kapha* involvement³¹.

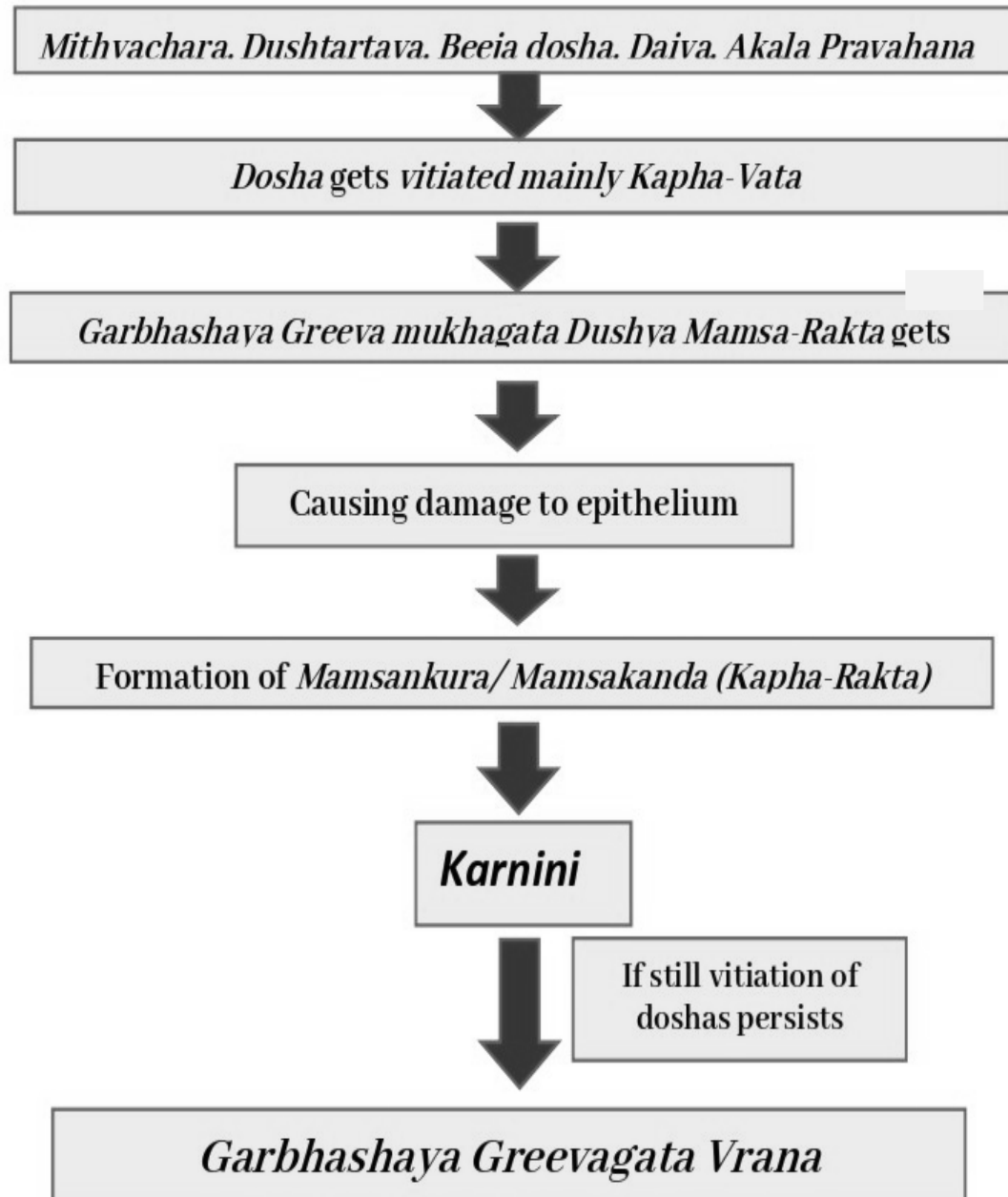
अतिसंवृतः अतिसङ्कुचितोवातेन । अतिविवृतोव्यात्तमुखः पित्तशोणितेन । काठिन्यंवातेन । अतिमार्दवंकफेन; अन्येपित्तशोणितेनमार्दवमिच्छन्ति । उत्सन्नउन्नतमांसः, अवसन्नोहीनमांसोनिम्नाकारः, एतौरक्तपित्तेन; अन्येवातेनोत्सन्नावसन्नत्वमिच्छन्ति; 'अत्रोत्सन्नत्वंकफेन' इतिकेचित् । अतिशैत्यंकफवातात् । अत्यौष्ण्यंरक्तपित्तात् । कृष्णादयोवर्णायथासम्भवंवातादिभिर्ज्ञेयाः ।

(Dalhana on Su. Su. 22/7)

In chronic stages of Cervical erosion when it is associated with chlamydial infection etc., it may manifest as too wide, elevated, red or yellow colors, discharging pus, with foul smell, associated with *daha*, *paka*, *raga*, *kandu*, *pidaka* (nabothian follicles), *dushta shonita sravi* (discharging vitiated blood), chronic in nature etc.

Samprapti:-

**FLOW CHART OF PATHOGENESIS OF
GARHASHAYA GREEVAGATA VRANA**



Curable persons:

Persons who are young in age, strong, full of vitality and with tolerant psyche or in a single person with all these four qualities, the wounds are curable in easiest way. There, in youthful persons due to fresh (developing) tissues, wounds heal up rapidly; in strong persons, because of firm and profuse musculature, applied sharp instruments do not touch vessels, ligaments etc., in those having high vitality pain, injury, dietetic restrictions etc., do not produce malaise and in those having tolerant psyche no pain is felt even by harsh operations. Thus they are easily curable³².

तत्र, वयः स्थानाद्वदनां प्राणवतांसत्त्ववतां (आत्मवतां) चसुचिकित्स्याव्रणाः; एकस्मिन्वापुरुषेयत्रैतद्गुण चतुष्टयंतस्यसुखसाधनीयतमाः । तत्र, वयःस्थानांप्रत्यग्रधातुत्वादाशुव्रणारोहन्ति; वदनांस्थिरबहुमांस त्वाच्छस्त्रमवचार्यमाणं सिरास्नाय्वादिविशेषान्नप्राप्नोति; प्राणवतां वेदनाभिघाताहार यन्त्रणादिभिर्नग्लानिरुत्पद्यते; सत्त्ववतांदासुरैरपिक्रियाविशेषैर्नव्यथाभवति; तस्मादेतेषांसुखसाधनीयतमाः ॥

(Su. Su. 23/3)

Curability according to the site:

Wounds situated in buttocks, rectum, genitals, forehead, cheeks, lips, ear, scrotum, abdomen, *jatrumukha* (root of neck), interior of the mouth heal up easily³³.

स्फिक्पायुप्रजननललाटगण्डौष्ठपृष्ठकर्णफलकोषोदरजत्रुमुखाभ्यन्तरसंस्थाःसुखरोपणीया⁽¹⁾व्रणाः ॥

(Su. Su. 23/5)

Treatment of Vrana:

For scraping of wound *kshauma* (linen), *Plota* (cotton cloth), *Pichu*, *Samudraphena*, *Yavakshara*, *Saindhava* and turgid (*Karkasha*) leaves may be used as a substitute of instrument³⁴.

क्षौमं प्लोतं पिचुं फेनं यावशूकं ससैन्धवम् ।

कर्कशानि च पत्राणि लेखनार्थं प्रदापयेत् ॥ (Su. Ci 1/40)

In wounds which have raised granulation tissue, are hard, with itching and are chronic, and difficult in cleansing should be cleansed by applying *Kshara* (caustic alkali)³⁵.

उत्सन्नमांसां कठिनां कण्डूयुक्तांश्चिरोत्थितान् ।

तथैव खलु दुःशोध्यान् शोधयेत् क्षारकर्मणा ॥ (Su. Ci. 1/88)

Table No. 2 Showing difference between Cervical erosion and Vrana.

	Cervical erosion	Vrana
Symptoms		
Discharge	White discharge Per vagina	<i>Pichhila srava</i>
Pain	Pelvic pain, Backache	<i>Toda, Bheda, Sphurana, Manda Vedana</i>
Itching	Pruritus vulvae	<i>Kandu</i>
Burning	Burning sensation present	<i>Daha, Paka</i>
Signs		
<i>Vrana</i>	Bright reddened area extended beyond the os in the ectocervix	Red or <i>Pandura</i>
<i>Srava</i>	Mucoid, mucopurulent, curdy discharges	<i>Aruna, Bhasma, Kapota, Peeta-Nila, Pandura</i>
<i>Gandha</i>	Present or absent	<i>Putigandha, Kunapagandha</i>
<i>Shotha</i>	Inflammation present	<i>Shotha/Paka</i>

Management:

According to the chronicity of *Vrana*, *Ksharakarma*, *Agnikarma* are to be applied to manage the *Vrana*.

1. Ksharakarma

शस्त्रानुशस्त्रेभ्यःक्षारःप्रधानतमः, छेद्यभेद्यलेख्यकरणात्त्रिदोषघ्नत्वाद्विशेषक्रियावचाराणाच्च ।।

(Su. Su. 11/3)

Kshara is mentioned as superior therapy among the sharp and subsidiary instruments because of its properties such as excision (*Chedana*), incision (*Bhedana*), scarification (*Lekhana*) and it pacifies all three *doshas* and also being used for specific functions³⁶.

Properties of Kshara:

नानौषधिसमवायात्त्रिदोषघ्नः, शुक्लत्वात्सौम्यः; तस्यसौम्यस्यापि सतो दहन पचन दारणादिशक्तिरविरुद्धा, आग्नेयौषधिगुणभूयिष्ठत्वात्कुटुक उष्णस्तीक्ष्णः पाचनो विलयनः शोधनो रोपणः शोषणः स्तम्भनो लेखनः कृम्यामकफकुष्ठविषमेदसामुपहन्ता पुंस्त्वस्य चातिसेवितः ।।(Su. Su. 11/5)

Kshara consists of several chemical constituents thus alleviates three *doshas*, *Saumya* in nature due to whiteness, instead of *saumya* property it is having potency for burning, digestion, tearing etc. *Kshara* is also having *Katu*, *Ushna*, *Tikshana*, *Pachana*, *Vilayana* (dissolving), *Shodhana*, *Ropana*, *Shoshana*, *Stambhana*, *Lekhana* properties. It destroys *Krimi*, *Ama*, *Kapha*, *Kushtha*, *Visha*, *Meda* and also the virility (*Pumstvam*) is destroyed by excessive use of *kshara*³⁷.

Acharya Sushruta also mentioned specifically eight properties of *Kshara*: it should not too sharp (*Tikshana*), too mild (*Mridu*), too white (*Shukla*). It should be smooth, slimy, unspreading, wholesome and quickly acting³⁸.

नैवातितीक्ष्णो न मृदुः शुक्लः श्लक्ष्णोऽथ पिच्छिलः ।

अविष्यन्दी शिवः शीघ्रः क्षारो ह्यष्टगुणः स्मृतः ॥ (Su. Su. 11/16)

Types:

Kshara is of two types – *Pratisaraniya* (Pastable) and *Paniya* (Ingestible). In the present clinical study *Pratisaraniya Kshara* is used.

Uses of *Pratisaraniya Kshara*:

The *Pratisaraniya kshara* is to be applied externally in *Kushtha*, *Kitibha*, *Dadru*, *Mandal*, *Kilasa*, *Arbuda*, *Arsha*, *Dushtavrana*, *Visha* and *Mukharogas*³⁹.

तत्र प्रतिसारणीयः कुष्ठकिटिभद्रमण्डलकिलासभगन्दरार्बुदार्शोदुष्टव्रणनाडीचर्मकील-

तिलकालकन्यच्छव्यङ्गमशकबाहयविद्रुधिकृमिविषादिषूपदिश्यते, सप्तसुचमुखरोगेषूपजिह्वाधिजिह्वोपकुश
दन्तवैदर्भेषु तिसृषु च रोहिणीषु, एतेष्वेवानुशस्त्रप्रणिधानमुक्तम् ॥ (Su. Su. 11/7)

Samyaka Dagdha Lakshana:

On proper application of *kshara*, the disease gets alleviated, lightness appears and discharge is stopped⁴⁰.

तत्र सम्यग्दग्धविकारोपशमो लाघवमनासावश्च ॥ (Su. Su. 11/26)

Contraindications of *Kshara* application:

Debilitated, child, old person, timid, suffering from anasarca, abdominal enlargement, *Raktapitta*, *Garbhini*, *Ritumati*, *Jwara*, *Prameha*, *Ruksha*, debilitated with chest wound, complicated with thirst and fainting, impotent and having displaced testicles, *Apavrita yoni* and *Udavrita yoni* are contraindications for *kshara karma*⁴¹.

अथनैतेक्षारकृत्याः-तद्यथा-दुर्बलबालस्थविरभीरुसर्वाङ्गशूनोदरिरक्तपित्तिगर्भिण्यृतुमती
प्रवृद्धज्वरिप्रमेहिरुक्षक्षतक्षीण-तृष्णामूर्च्छोपद्रुतक्लीबापवृत्तोद्वृत्तफलयोनयः ॥

(Su. Su. 11/28)

II. AGNIKARMA

Importance of Agnikarma:

क्षारादग्निर्गरीयान्क्रियासु व्याख्यातः, तद्गन्धानां रोगाणामपुनर्भावाद्भेषज शस्त्र
क्षारैरसाध्यानांतत्साध्यत्वाच्च ॥ (Su. Su. 12/3)

Agnikarma is considered better than *Kshara*; because non- recurrence of diseases and its success in incurable diseases by *bheshaja*, *sastra* and *Kshara*⁴².

Methods of Agnikarma:

Agnikarma is applied in following patterns - circular, dot, linear and rubbing.

Indications of Agnikarma:

When *Vayu* is situated in *Tvak*(skin), *Mamsa* (muscle), *Sira* (blood vessel), *Snayu* (ligament), *sandhi* (joint) and *Asthi* (bone) with intense pain, wound with raised, hard and numbed granulation; in *Arsha* (piles), *Arbuda* (tumour), *Bhagandhara* (fistula), *apache* (scropula), *Shlipada* (elephantiasis), *Charmakila* (wart), *Tilakalaka* (mole), *Vridhhi* (inguinal hernia), *Nadi* (sinus) and excessive hemorrhages etc., in all these conditions *Agnikarma* advised⁴³.

त्वङ्मांससिरास्नायुसन्ध्यस्थिस्थितेऽत्युग्ररुजिवायावुच्छिन्नकठिनसुप्तमांसेव्रणग्रन्थिशोर्बुद्भगन्द
रापचीश्लीपदचर्मकीलतिलकालकान्त्रवृद्धिसन्धिसिराच्छेदनादिषुनाडीशोणितातिप्रवृत्तिषुचाग्निकर्मकुर्यात् ॥

(Su. Su. 12/10)

Contra-indications of Agnikarma:

Persons with *pitta* constitution, *antahshonita* (internal hemorrhage), *bhinnakoshta* (ruptured viscera), *anaddhruta shalya* (unextracted foreign body), *durbala* (debilitated), child, old, timid, persons affected with multiple wounds are contra- indicated for *Agnikarma*⁴⁴.

अथेमानग्निनापरिहरेत्-पित्तप्रकृतिमन्तःशोणितंभिन्नकोष्ठमनुद्धतशल्यं दुर्बलबालं वृद्धं भीरुमनेकव्रण
पीडितमस्वेद्यांश्चेति ॥ (Su. Su. 12/14)

Signs appear in Mamsa burning:

After application of *Agnikarma* on *mamsa dhatu* (muscular tissue), the following signs appear - *kapota varna* (pigeon's color/gray colour), *alpa shvayathu* (mild swelling) and pain along with dry and constricted wound⁴⁵.

कपोतवर्णताऽल्पश्वयथुवेदनाशुष्कसङ्कुचितव्रणताचमांसदग्धे || (Su. Su. 12/8)

Vrana Apathya – Non-congenial:

Navadhanya (new cereals), *Masha*(black-gram), *Tila* (sesamum), *Kalaya* (lathyrus sativus), *Kulattha*(horse-gram), *Nishpava* (rajasimbi), *Haritashaka* (greens like *Tulasi*, *Mulaka*, *Curika* etc), *Amla* (sour), *Lavana* (salty), *Katuka* (spicy) foods, *Guda Pishta Vikruti* (preparations made of jaggery and flour), *Vallura* (dried meat), *Sshushkashaka* (dried vegetable), meat of *aja* (goat), *avika* (sheep), *audaka* (marshy), *anupa* (marshy) land animals, *vasa* (fat of pure muscle), *Shitodaka* (cold water) *Krishara*, *Payasa* (a kind of liquid milk sweet), *Dadhi* (curd), *Dugdha* (milk), *Takra* (butter-milk) etc⁴⁶. Day- sleep should be avoided⁴⁷. The person who got addicted to *Madya* (wine) should avoid *Maireya*, *Arishta*, *Asava*, *Sidhu* and products of *Sura*⁴⁸.

नवधान्यमाषतिलकलायकुलत्थनिष्पावहरितकशाकाम्ललवणकटुकगुडपिष्टविकृतिवल्लूरशुष्कशाका
जाविकानूपौदक-मांसवसाशीतोदककृशरापायसदधिदुग्धतक्रप्रभृतीनिपरिहरेत् || (Su. Su. 19/16)

नचदिवानिद्रावशगः स्यात् || १ || (Su. Su. 19/9)

मद्यपश्चमैरेयारिष्टासवसीधुसुराविकारान्परिहरेत् || (Su. Su. 19/18)

MODERN REVIEW OF DISEASE

Cervical Erosion is a disease of the cervix uteri. Cervix is the lower part of the uterus, divided into two parts, the part that is projected into the vagina known as portio-vaginalis and the other half that is above the vaginal attachment is called supravaginal cervix. The vaginal part is covered with squamous epithelium and continuous with that of the vagina. Endocervix is covered by columnar epithelium.

The upper part of the cervix is composed mainly of involuntary muscle, many of the fibres continue with those of the corpus. The lower half has a thin peripheral layer of muscle (the external cervical muscle) but is otherwise entirely composed of fibrous and collagenous tissues. The mucous membrane lining the canal (endocervix) is thrown into folds are called *arbor vitae*.

Potential Cervical abnormalities are Nabothian cysts, Cervical leiomyomas, Cervical Ectropion (erosion), Cervical (endo cervical) polyps, Cervical endometriosis, Cervical Intra- epithelial Neoplasia, Cervical Cancer etc. Cervical erosion is one of the commonest conditions met clinically in general gynecological practice.

ETYMOLOGY

Latin term ‘e-ro’zhun’ - cervix + erodere = meaning ‘to consume’⁴⁹.

The term Erosion is derived from the Latin word *erosionem*⁵⁰ (nominative *erosio*) means "a gnawing away," which is noun of action of word *erodere*⁵¹ "to gnaw away or to eat out"⁵² an assimilated form of *ex* "away" + *rodere* means in the erosion eating away of a surface is seen⁵³.

Erosion meaning

Oxford dictionary of medicine defined erosion as the gradual destruction of tissue or tooth enamel by physical or chemical action⁵⁴. And also it is a place where surface tissue has been gradually destroyed. In Taber’s cyclopedic medical dictionary meaning of erosion is given as ‘an eating away of tissue’ and also external or internal destruction of a surface layer by physical or inflammatory process⁵⁵.

Definition

It is a condition where the squamous epithelium of the Ectocervix is replaced by columnar epithelium, which is continuous with the endocervix⁵⁶.

It is the extension of the columnar endocervical epithelium beyond the external cervical os and it grows by replacing the squamous epithelium⁵⁷. It is not an ulcer, but it occurs due to interplay between two epithelia⁵⁸.

Synonyms:

Cervical Ectropion, Cervical Ectopy Cervical erosion is a condition where the endocervical columnar epithelium protrudes out through the external os of the cervix and on to the vaginal portion of cervix, and undergoes squamous metaplasia, and transforms to stratified squamous epithelium⁵⁹.

The exposed columnar epithelium appears red because of the blood vessels just below the surface. It is a benign condition but if left untreated may leads to infertility and predisposes to cervical malignancy. Cervical cancer is the commonest malignancy in females in India and incidence is twenty times more than that of endometrial carcinoma. Cervical erosion appears as an early sign of cervical cancer. About 85% of women suffer from this lesion during their life time and it is a benign disease of the cervix and usually present in reproductive age group, although it is sometimes found in young children⁶⁰.

India has a population of 453.02 million women aged 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 122844 women are diagnosed with cervical cancer and 67477 die from the disease. Cervical cancer ranks as the second most frequent cancer among women in India and the second most frequent cancer among women between 15 and 44 years of age⁶¹. It is well known that cervical ectropion is a cervical lesion with oncogenic risk, but the studies are still inconsistent on solving this type of injuries^{62, 63, 64, 65, 66}. Nowadays the 14-37% reported incidence for cervical ectropion is increasing^{67, 68, 69, 70, 71}. Also, additional diagnosis of Chlamydia, Mycoplasma, Ureaplasma, HPV, HvS2, places the patient into a group of greater oncogenic risk^{72, 73, 74, 75, 76}.

INCIDENCE

- Bang *et al*⁷⁷ in their study reported cervical erosion to be 45.70% presently 80-85% of women have been computed with cervical erosion.
- More than three fourths of adult women suffer from this condition.⁷⁸
(Dawn,1997).

PREVALENCE:

The prevalence of cervical ectropion ranges from 17% to 50% in Briton⁷⁹. A prevalence study in China among female users of family planning services reported that 43.2% of the women had cervical ectropion⁸⁰. A study carried out on women using oral contraceptive pills (OCPs) and IUCDs in Benghazi, Libya and observed that cervical ectropion was the commonest gynecological disorder among the women (54.9%)⁸¹. A cross-sectional study involving 357 females in the reproductive age group (15-44) was conducted in an urban community of Nagpur with the objective of studying the role of socio-economic factors and cytology in cervical erosion. High percentages of inflammatory smears i.e. (75.68%) were obtained in women with cervical erosion. Cervical erosion was more common in illiterate and women with low literacy status as compared to women with higher education. Majority of cases of cervical erosion (75.6%) were detected in women with highparity⁸².

Predisposing factors:**Parity:**

The prevalence of erosion increased with parity but, when the effects of other factors were controlled, decreased in women aged 35 and over⁸³.

Contraceptive use:**Oral Contraceptive Pills:**

Erosion was significantly more common in women taking the "pill" and less common in women using barrier methods of contraception than in others⁸⁴. On a study Cervical ectropion has been found associated with both the combined oral contraceptive pill and chlamydia trachomatis⁸⁵. Oral contraception was also associated with the radius of ectopia, and among users of oral contraception ectopia was associated with duration of oral contraception⁸⁶.

Intra-Uterine Contraceptive Device:

Usually oral contraceptive pill usage is described as risk factor, but some studies found that IUCD use is also a pre-disposing factor for cervical ectropion. A 5-year retrospective study was conducted by assessing existing clinic records from years 2007–2011 by Kikelomo Ololade Wright et al., to determine the prevalence of

cervical ectropion and associated risk factors among clients with intra-uterine contraceptive devices

(IUCDs) attending family planning clinic of a tertiary health institution in Lagos, Nigeria. They have found that the mean age of the IUCD users was 34.7 ± 6.52 years, and on routine pelvic examination, seventy-nine clients (12.6%) had cervical ectropion. Thirty-nine (6.2%) clients had presented with a history of abnormal vaginal bleeding while 12.1% had vaginal discharge. On bivariate analysis, previous hormonal contraceptive use ($P=0.041$) and vaginal discharge ($P<0.001$) were found significantly associated with developing cervical ectropion⁸⁷. A Turkish study showed that 14.7% of women using IUCDs had cervical ectropion. Cervical ectropion and vaginal discharge were also found to be significantly high among IUCD users compared with women on OCPs⁸⁸.

Infections:

Cervical ectopia is found to have association with some sexually transmitted diseases. A cross-sectional study was conducted with colposcopic, cytologic, and microbiologic examination of 764 randomly selected women attending a sexually transmitted disease clinic and 819 consecutive college students undergoing routine annual examination. They found that cervical ectopia was positively associated with oral contraception and Chlamydia trachomatis infection⁸⁹. Cervicitis (evaluated by Gram stain, Papanicolaou smear, and colposcopy) was associated with cervical infection by *C. trachomatis* and cytomegalovirus (both populations) and with gonorrhea and cervical herpes simplex virus infection (patients with sexually transmitted diseases)⁹⁰.

Trachomatis vaginitis is also found to be associated with or a causative factor for cervical erosion⁹¹.

DES exposure in-utero:

Exposure of the human of the fetus to diethylstilbestrol (DES) and other synthetic estrogens is an important iatrogenic epidemic in the United States alone, at least four million fetuses and their mother had a substantial exposure to these estrogens. The sequelae of in utero exposure of daughters include cervical ectopy, clear cell adeno-carcinoma of the vagina and cervix, various gross anomalies of the genital tract, vaginal adenosis and other vaginal epithelial changes etc⁹².

ETIOLOGY:

Developmental (error in mullarian duct system) and exposure to hormones (effect of circulating maternal oestrogen) are the causes for congenital ectopy and infections {gonococcal, streptococcal, staphylococcal, trichomonas, candida albicans}, hormonal (excessive oestrogens) effects and environmental like changes in vaginal pH etc., are the acquired causes of cervical erosion.

- **Congenital**
- **Acquired**
- **Congenital**

At birth, in about one-third of cases, due to influence of estrogen hormone derived from maternal circulation, columnar epithelium of the endocervix extends beyond the external os. This erosion gets healed spontaneously as soon as estrogen levels fall.

- **Acquired**

Hormonal:

Cervical erosion is estrogen dependent lesion. The squamo-columnar junction is a dynamic one and moves either inwards or outwards depending on estrogen levels. When the estrogen level is high, it moves out due to the extension of the columnar epithelium towards the vaginal portion of the cervix replacing the squamous epithelium. High estrogen levels are observed during pregnancy as well as in oral contraceptive pill users. The squamo-columnar junction returns back to its normal position after 3 months following delivery and little earlier following withdrawal of pill.

Infection:

Infection is not a primary cause, but chronic cervicitis may see associated with it. Infection may supervene on an ectopy because of the delicate columnar epithelium which is more vulnerable to trauma and infection.

Types of Erosion:

Erosions have been classified into three varieties: congenital erosion, erosion associated with chronic cervicitis and papillary or hormonal erosion.

I. Congenital erosion:

The endocervical columnar epithelium grows down from the cervical canal during late intrauterine life to meet the squamous epithelium of the portio vaginalis. Whenever the histological os extends beyond the anatomical os, the cherry red endocervical epithelium appears as well-circumscribed erosion around the external cervical os. High levels of maternal oestrogen during pregnancy contribute to its occurrence. After childbirth, this entity undergoes spontaneous remission. Rarely does it persist in later life. A similar lesion may be sometimes seen in nulliparous women using oral contraceptive pills. It does not affect the woman adversely.

II. Erosion associated with Chronic Cervicitis:

Chronic cervicitis eventually leads to formation of erosion. Due to chronic inflammation, pus and mucus are discharged from the cervical canal and allows cervix to bathe in these discharges. These discharges are alkaline in nature and tend to cause maceration of the squamous epithelium covered the external os. So thus after some time these cells gets desquamated and raw red area of denuded of epithelium around the external os is formed. In the process of healing, columnar epithelium from the cervical canal grows over and covers the denuded area. This red area is covered by smooth glistening translucent epithelium. The affected area around the external os is simple flat erosion.

After a variable time interval, the squamous epithelium of the vaginal portion of cervix replaces the columnar epithelium of endocervix, the squamous epithelium growing under the columnar epithelium and gradually pushing it away, until finally the squamous epithelium has completely grown over the eroded area. Unless chronic cervicitis has been cured in the mean time, chronic cervicitis leads to recurrent erosions. Sometimes, the columnar epithelial cells of endocervix undergo squamous change. This squamous down growth is known as epidermization. Its importance lies in the fact that, to the untutored eye, it looks like an epidermoid carcinoma which has invaded the glands. The condition is neither malignant nor premalignant.

Follicular cystic erosion is produced by the squamous epithelium occluding the mouths of these glands, as it replaces the columnar epithelium of the erosion during the stage of healing. The blocked glands become distended with secretion and form small cysts which can be seen with the naked eye, the so-called nabothian follicles.

III. Hormonal or Papillary Erosion

Hyperplasia of endocervical epithelium has been postulated to cause the papillary type of cervical erosion. One cause of this columnar epithelial hyperplasia is hormonal over activity. These papillary erosions are therefore commonly seen in pregnancy and they tend to regress spontaneously in the puerperium. During pregnancy, oestrogen is mainly responsible for causing erosion. Women who take hormonal contraceptives also show hyperplasia of the endocervical epithelium and papillary erosion on the cervix. These regress after the drug is discontinued.

These erosions can become infected by microorganisms from the vagina, when chronic cervicitis coexists with erosion⁹³.

PATHOGENESIS:

Erosion implies loss of tissue, so does ulceration, and eversion means the outward growth of the columnar epithelium to replace the squamous surface of the portio. It is seen more commonly among the parous women because endo-cervicitis is so frequently a sequel of parturition.

Hyperaemia if long continued, leads to the development of new blood vessels, and that in turn provides over nutrition, this further causes hypersecretion or hypertrophy. The processes of infection always begin in the delicate columnar mucous membrane of the cervical canal, which is more susceptible to infection than the squamous epithelium that covers the portio vaginalis. But the squamous surface nearest the cervical canal cannot ignore indefinitely this vascular disturbance in its immediate neighborhood. It soon feels the effect of the over-nutrition, especially in its deepest basal layer, which will begin to divide more rapidly, and, as the division speeds up, the superficial keratinized layers gradually fall off, and then division takes place at the expense of differentiation. The superficial layers no longer have time to differentiate in to squamous, keratinized, these imbricated layers pushed off and desquamated by the rapid division. Rapidly dividing cells have no time to become adult but remain in an embryonal state. So that ectropion is an area covered with embryonal squamous cells, the so called granulation tissue. This special granulation tissue will revert back if normal nutritional conditions and normal substratum are established. On examination outer border is ill defined, and pearly opalescence is seen, portio-vaginalis is slowly lost, gives place to a bluish tinge due to underlying veins. These vessels and their consequent hypernutrition are the forerunners of rapid division and lessened differentiation.

The irritation of microbic endocervicitis is the primary cause of the ectropion, and the continuance of the irritation causes the ectropion to persist. The interesting sequel is that the squamous cells at the periphery do not grow in and cover the area of ectropion. (The pathology of cervical ectropion (Cervical erosion), J.R.GOODALL)

The simple epithelium of the cervix uteri begins to differentiate about the third month of foetal life in to two types, that lining the cervical canal becoming columnar and that covering the vaginal portion becoming squamous and laminated. At birth, the boundary between these two epithelia normally lies just within the lips of the external os, So that no glandular tissue is visible from the vagina. Occasionally, by faulty development, the columnar epithelium of the canal covers the vaginal portion of the external os over a circular area of varying size , producing the so- called congenital erosion of infants. During this process and during the epithelial differentiation of the normally developed cervix the two types of epithelium are close association and they replace each other with comparative ease and that degradation of columnar to squamous cells occurs readily.

Acquired erosion of multiparous women, is of different origin, The epithelium of the external os disappears and proliferating gland tissue continuous with that lining the canal replaces its squamous lining. In a few cases the condition is explained by inflammatory hyperplasia of congenitally heterotopic glandular tissue ; some cases may be due to actual ectropion of the lining of the canal during labour , but it appears that the majority are due to the chronic endo- cervicitis of repeated pregnancies or of gonococcal infection , and that the squamous lining of the os is actually pierced by inflamed glandular tissue which presents at the external os as areddened , roughened and irregularly shaped area the simple glandular erosion. Several factors tend to endow the common glandular erosion with a considerable degree of chronicity. Among them surface infection is common causes vascularity and replacement fibrosis.

The glandular tissue undergoes secondary changes, frequently becoming cystic, and on long standing the surface of the erosion often becomes covered by fine delicate papillae (papillary erosion) due to projection as multiple polyps of the inflamed oedematous interstitial tissue lying between the gland mouths. (The pathology of cervical erosion by Geoferey Hadfield, pathologist to the Bristol general Hospital)

CLINICAL MANIFESTATIONS OF EROSION CERVIX

Cervical ectropion is most commonly asymptomatic. It can occasionally present with post-coital bleeding, intermenstrual bleeding, or excessive discharge (non-purulent). Offensive, irritant, profuse vaginal discharges, formation of Nabothian follicles, contact bleeding, dyspareunia, intermenstrual bleeding, bowel irritability, pelvic pain etc., are the common clinical features. Association of chronic cervicitis leads to low back pain⁹⁴. It is also a cause of infertility and constitutional ill health and sometimes it produces great psychological upset in women. This condition if left untreated, in the chronic stages, the columnar epithelium undergoes squamous metaplasia⁹⁵.

Vaginal discharges:

Due to infection and epithelial lining, profuse muco-purulent, irritant, offensive and rarely blood-stained discharges appear due to congestion.

Women attending a family planning clinic were studied to determine the relation between cervical erosion and discharges and it is found that there was a significant but modest association between erosion and vaginal discharge⁹⁶.

Ante Partum Hemorrhage:

During pregnancy erosion becomes very vascular and bleeds easily and the patient thus presents with an Ante Partum Hemorrhage.

Post-coital bleeding:

It occurs due to high vascularity.

Others:

Associated infection with cervical erosion causes low backache, abdominal pain and deep dyspareunia.

SIGNS - APPEARANCE OF EROSION:

Per Speculum Examination:

There is a bright red area surrounding and extending beyond the external os in the ectocervix. The lesion may be smooth or have small papillary folds. On rubbing with a gauze piece, there may be multiple oozing spots. The feel is soft and granular giving rise to a grating sensation⁹⁷.

Erosion takes the form of reddened velvet like area around the external os, with its inner margin continuous with the endocervical lining and with a well-defined outer margin. The reddened area of erosion may be slightly raised above the level of the squamous epithelium of the vaginal portion of the cervix and is smooth glistening if it is covered by columnar epithelium.



Figure No. 1 : Showing appearance of Cervical erosion

When it is associated with chronic cervicitis, the cervix becomes fibrosed, hypertrophied with the formation of the nabothian follicles around the area of erosion.

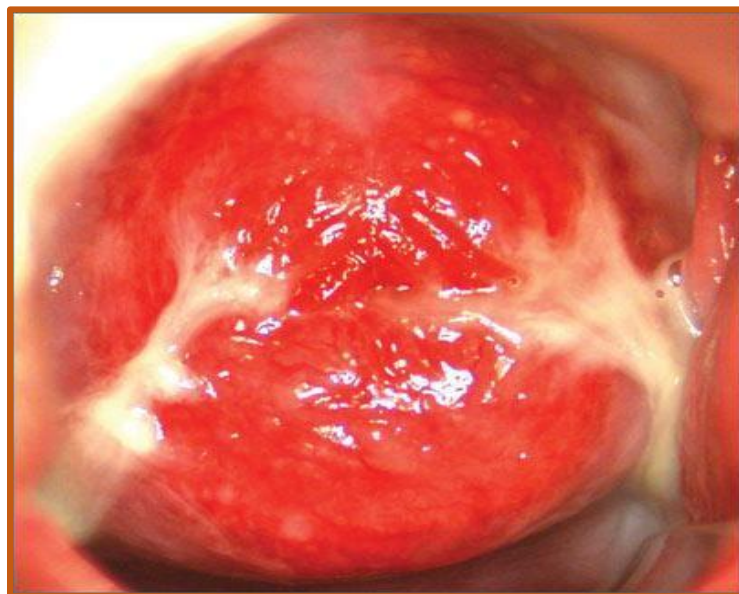


Figure No. 2 : Showing muroid discharge

Mucoid discharge may be seen emanating through the os and around the erosion. The erosion is soft and bleeds easily if swabbed vigorously during examination⁹⁸.

COMPLICATIONS:

The typical glandular heterotopias of erosion are in intimate relation with the infiltration of cancer. Una M. Kroll carried out a study for six-year period on 1,808 women aged between 20 to 59 years who underwent Gynecological examination at a well-woman clinic. Cervical erosions were found in 269 women, among them nine patients had cervical carcinoma, confirmed by biopsy; of these eight had eroded cervixes. The remaining patients with non-malignant erosions were examined at six-monthly intervals. Of these, roughly 39% showed spontaneous healing within a year, 31 % responded to medical treatment, 17% healed only after surgical treatment, 9% remained unhealed when reviewed six months after the last active treatment, and 4% replaced after originally healing well⁹⁹.

A study carried to find out the association of Cervical Ectopy with heterosexual transmission of HIV virus. It was a cross-sectional study of HIV-seropositive men and their spouses, conducted in Nairobi, Kenya. Out of total 70 spouses, 40 (57%) were seropositive and 30 (43%) were seronegative for HIV. In univariate analysis, the presence of cervical ectopy (odds ratio, 4.7; P =.006) was the only statistically significant variable associated with HIV infection in women. Findings of this suggest that cervical ectopy may be a newly identified risk factor for heterosexual transmission of HIV¹⁰⁰.

Other investigations:

1. Vaginal Swab culture
2. Colposcopy
3. Histo-pathology of Cervical tissue.

Diseases that are to be differentiated:

Ectropion, chronic cervicitis, syphilitic ulcers, Tuberculosis of the cervix, cancer of the cervix are the conditions which are need to be differentiated to confirm the case of erosion of the cervix. Papanicolaou smear and biopsy are required in suspected cases¹⁰¹.

Following are the features of these conditions:

- Ectropion: The lips of the cervix are curled back to expose the endocervix. This may be more apparent when the lips of the cervix are stretched on per speculum examination.
- Chronic cervicitis: it is also often manifests clinically as erosion or as a Nabothian follicle¹⁰².
- Early carcinoma: It is indurated, friable and usually ulcerated which bleeds to touch. It can be confirmed by biopsy.
- Primary lesion (chancre): The ulcer has a punched out appearance.
- Tubercular ulcer: Indurated ulcer with caseation at the base is seen. Biopsy is needed to confirm the diagnosis¹⁰³.

MANAGEMENT OF CERVICAL EROSION

The decision to treat or not remains controversial in Cervical erosion. According to studies in support of routine treatment of cervical erosion, there is a possible relationship between squamous metaplasia and squamous cell carcinoma of the cervix. Cervical erosion can be managed by topical as well as systemic treatments.

Symptomatic cases

Detected during pregnancy and early puerperium, treatment should be withheld for at least 12 weeks postpartum. In pill users, the pill should be stopped and barrier method is to be advised. Persistent ectopy with troublesome discharge should be treated surgically by—

- i. Thermal cauterization
- ii. Cryosurgery
- iii. Laser vaporization

All the methods employed are based on the principle of destruction of the columnar epithelium to be followed by its healing by the squamous epithelium¹⁰⁴.

I. THERMALCAUTERIZATION

This is an operation whereby the eroded area of the cervix is destroyed either by thermocoagulation or red hot cauterization. It gives satisfactory results. By this

therapy tissues of the cervix are coagulated; the columnar epithelium is destroyed. The raw area on the vaginal portion of the cervix gets subsequently covered by squamous epithelium. In the cervical canal, diathermy coagulation destroys all infection lying in the depths of the racemose glands and in due course healthy epithelium grows down from the upper part of the cervical canal to cover the raw area. Usually endocervical cauterization requires cervical dilatation and general anaesthesia as well. If not done that leads to cervical stenosis.

Indications:

Cervical ectopy with troublesome discharge. Prior cervical smear or biopsy if necessary should be undertaken.

Procedures:

Superficial cauterization can be done without anesthesia as an outdoor procedure. But in cases where extensive cauterization is required, there admission in IPD is required because it should be done under general anesthesia.

- Lower part of the cervical canal is dilated by one or two small dilators.
- The whole eroded area is cauterized by cautery point by giving linear strokes in radial fashion starting from inside the cervical canal to over the eroded area. The strokes should be made about 2 millimeters deep and at a distance of 1 centimeter reach.
- The area is smeared with antibiotic ointment.
- Generally it takes about 2–3 weeks time for sloughing of the burn area. Complete epithelialization by squamous epithelium occurs by 6–8 weeks. During this period increased white vaginal discharges are found. Counselling of patient is necessary at this stage that discharges are due to procedure.

Associated treatment:

There may be serosanguineous or even blood stained discharge for about 2–3 weeks. Local (cream) and systemic antibiotic therapy need to be given, when infection is associated.

II. CRYOSURGERY

This is a procedure where by destruction of the tissue is done by freezing. Cryosurgery is now being used in place of cauterization in many centres. Cryotherapy is safer than cautery as it avoids accidental burns in the vagina and is painless.

Indications

1. Cervical ectopy
2. Benign cervical lesions—such as CIN, condyloma accuminata, leukoplakia, etc.
3. Condyloma accuminata of vulva and VIN diagnosed colposcopically and not more than 2 cm in size.
4. VAIN, condyloma accuminata or vault granulation tissue following hysterectomy.
5. As a palliative measure to arrest bleeding in carcinoma cervix or large fungating recurrent vulval carcinoma.

Principle:

It consists of a probe, the tip of which is cooled to a temperature below freezing point i.e. -60°C . Freezing produces cellular dehydration by crystallization of intracellular water and ultimately death of cells. This is effective by rapid expansion of gas which is passed through it. The refrigerants used in cryosurgery are carbon dioxide (-78°C), Freon (-223°C), nitrous oxide (-189°C) and nitrogen (-196°C). All are equally effective. Carbon dioxide is widely used while nitrous oxide and liquid nitrogen are also used.

Procedures:

This is an outpatient procedure and is done without anesthesia. Commonly used technique is freeze-thaw-freeze.

A probe that adequately covers the lesion is selected. The probe tip is lightly covered with water-soluble jelly to provide good thermal contact with the cervix.

The appropriate cryosurgery probe is applied to the cervix and the freezing activated. When a good ice ball extending 4–5 mm beyond the edge of the probe is obtained, the freezing is stopped; the probe thawed (to raise the temperature above freezing point) and removed. The probe which adhered to the tissue should not be pulled out until the temperature rises again.

Usually 90 to 180 seconds are required to obtain a satisfactory freeze. If necessary, a second time freezing technique may be employed to get a good result. The application to the cervix freezes the tissue to a depth of about 3mm¹⁰⁵.

Advantages over thermal cautery

- It does not require anaesthesia and is an OPD procedure.
- Precise destruction of tissue.
- No secondary hemorrhage.
- Cervical stenosis is rare.

Drawbacks:

1. The area of erosion epithelializes and completes healing needs 6 - 10 weeks time.
2. Its main disadvantage is that the patient develops copious discharge per vaginum and causes potassium loss through extensive destruction of the tissue. To avoid this patient should be advised to drink plenty of fruit juice, tender coconut water or take potassium salt.
3. Repeat cryosurgery is required if any residual area is left untreated.
4. Intercourse is prohibited for 6–8weeks.

III. LASERTHERAPY

Microwave therapy: It has replaced cautery and cryosurgery in the management of chronic cervicitis and erosion in some centres. Advantages of laser are precision of excision or burning of tissue, absence of infection and haemorrhage and fast healing in 4 weeks. However, laser equipment is very expensive. Topical treatments for cervical ectropion including microwave tissue coagulation are widely used in many hospitals in China.

IV. CONIZATION OPERATION

If chronic cervicitis covers an extensive area or is not cured by any of the above methods, it may be necessary to perform conization operation, under general anaesthesia, using cold knife, diathermy or laser and a cone-shaped piece of cervical tissue removed. Prior dilatation of cervix ensures against postoperative stenosis. The

cone includes the endocervical mucous membrane together with the eroded area on the vaginal portion of the cervix. There is, however, some risk of reactionary as well as secondary haemorrhage; antibiotics are therefore required after conization. Intercourse is prohibited for 6–8 weeks. In young women, deep conization of the cervix can lead to mid trimester abortion, premature labour and cervical dystocia.

V. POLICRESULEN

One gram of Policresulen contains 360 mg of protein. It coagulates necrotic, pathologically altered tissue without destroying the healthy tissue. Policresulen coagulates the tissue and controls bleeding by vasoconstriction. Since it can induce labour, it is contraindicated during pregnancy. Weekly application of 5 g gel for 3 min over 4 weeks is effective in 98.2%, and is useful when cryosurgery or cautery is not available. It also avoids surgery. Coitus should be avoided the day gel is applied¹⁰⁶.

A randomized case-control study was carried out with the aim to estimate short and long term effectiveness of a topical treatment for cervical ectropion with 5 mg of deoxyribonucleic acid (DRNA). Two-hundred and twenty patients, colposcopically diagnosed with cervical ectropion, were consecutively enrolled and randomly divided into 2 groups: treated (group 1) and controls (group 2). The therapeutic plan consisted of Deoxy Ribo Nucleic Acid 5 mg as vaginal suppositories, administered for 15 days monthly; subsequently posology was reduced gradually. Both groups underwent a clinical and colposcopic follow-up on the 1st, 4th, 10th and 22nd months after the first examination. At the end of the study, the size of ectropion was considered as a parameter of re-epithelialization and provided a criterion of treatment effectiveness. Out of the 220 enrolled patients, 140 had completed the study protocol: 76 in treated group and 64 under control group. Outcomes after treatment and follow-up consisted of: 74 (97.4%) improved in group 1, against 2 cases (3.1%) in group 2. High statistical significance was reported comparing outcome frequencies in the 2 groups ($P < 0.0001$). This study has shown significant reduction ($P < 0.0001$) in cervical ectropion size between cases (topical treatment with DRNA 5 mg) and controls. A follow-up of 22 months confirmed the persistence and effectiveness of this medical approach¹⁰⁷.

VI. INTERFERON-ALPHA SUPPOSITORY THERAPY:

Three studies two trials compared microwave therapy with laser and one compared microwave therapy with interferon-alpha suppository therapy. Microwave therapy showed a better effect on cervical appearance over laser therapy in the women with grade II and III and also improved cervical appearance over interferon-alpha suppository therapy. There was no difference in grade I women. Microwave therapy showed less adverse bleeding than laser therapy during the treatment.

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DRUG REVIEW**INTRODUCTION:**

The present clinical study entitled ‘Assessment of effect of *Apamarga pratisaraniya Mridu kshara* in cervical erosion’ is carried out to see the therapeutic efficacy of *Apamarga mridu kshara* as a *pratisaraniya* (pastable) *kshara* application in Cervical erosion.

The Objectives of the study are:

To assess the therapeutic efficacy of *Apamarga Pratisaraniya Mridu Kshara* in healing of cervical erosion and reduction of vaginal discharge, low backache, postcoital bleeding and dyspareunia in comparison to the Electric cautery and to assess the clinical safety of *Apamarga Pratisaraniya Mridu Kshara* on cervical application.

Since long time specific therapies like diathermy cautery, cryosurgery are practiced and some topical applications also available in the existing modern system of medicine for the cure of cervical erosion. But none of these therapies are satisfactory in curing the cervical erosion and most of the times causing side effects like excessive vaginal discharges. Leaving this condition uncured results into development of cervical intraepithelial neoplasia, cervical cancer etc. Hence it is highly essential to develop an accurate therapy for erosion in the present circumstances.

In Ayurveda, almost all genital disorders are described under the heading *Yonivyapads* including cervical lesions. Majority of the treatment modes for these *Yonivyapads* are local treatments. Cervical erosion vis-a-vis *Karnini Yonivyapad* or *Garbhashaya Greevagata Vrana* is one such *Yonivyapad* which is to be treated with *Sthanika chikitsa* or in-situ treatments. Hence in the present study *Ksharakarma* is selected for the research purpose.

Previously various authors had studied the effect of different *Mridu Kshara* like *Apamarga*, *Citraka*, *Cirabilva*, *Snuhi*, *Tila*, *Arka* etc. drugs in cases of Cervical erosion; considerable number of studies had already carried out with *Apamarga Mridu Kshara* as trial drug. But those studies were carried out on small sample size. The present study has aimed to evaluate the comparative effect of *Apamarga*

Pratisaraniya Mridu Kshara and Electric cautery in Cervical erosion on moderately big sample. In *Apamarga mridu kshara*, *Apamarga* herbal drug was the single ingredient. For the purpose of washing of cervical erosion *Triphala* decoction was used. The individual drugs details are mentioned as under:

APAMARGA

Name of the drug	:	APAMARGA
Latin Name	:	<i>Achyranthes Aspera Linn</i>
Part Used	:	Whole plant
Family	:	Amaranthaceae
Synonyms¹	:	<i>Adhashalya, Mayura, Mayuraka, Pratyakpushpa, Kharamanjari, Kinihi Shikhari etc..</i>

VernacularNames²

• English	:	Prickly Chaff Flower
• Bengali	:	<i>Apamg</i>
• Gujrati	:	<i>Aghedo</i>
• Hindi	:	<i>Chirchita,</i>
• Kannada	:	<i>Uttarani</i>
• Malayalam	:	<i>Kataladi</i>
• Marathi	:	<i>Aghada</i>
• Punjabi	:	<i>Puthakanda</i>
• Tamil	:	<i>Nayuruvi</i>
• Telegu	:	<i>Uttarenu</i>
• Urdu	:	<i>Chirchita</i>



Etymology

- *Apamarga* : 'Apamrijyante vinashyante chardhiprabhritayo vyadhayo aneneti:' (Shabda kalpadruma page no: 68 prathama khand)

- *Mayuraka* : ‘*Mayuraprakriti ive pratihyartha*’
(*Shabda kalpadruma* page no:634 thruteeya khanda)
- *Pratyak pushpin:* ‘*Pratyak vimukham pushpani iti*’
(*Shabda kalpadruma* page no:270 thruteeya khanda)

Habitat:

Plant is found throughout India in plains as well as hills up to 900m elevation. It is fairly common to abundant, gregariously growing troublesome weed of dry waste lands, road sides, grasslands etc, found throughout the year but especially during rainy and cold seasons.

Historical evolution:

The earliest reliable information about medicine and medical practitioners in India is available beginning from 1500 BCE. We get insights into the medicinal practices of the Vedic period (1500-600 BCE) from the four Vedas along with their *Brahmanas*, *Aranyakas*, and *Upanishads*. Plants and their products formed the major portion of the *Materia Medica* of the Vedic healers.

Apamarga in Vedas

The earliest among the *Vedas*, *Rigveda* contains details of various herbs which are utilized in various rituals. However no reference of *Apamarga* is found in the text.

In different Samhitas of *Yajurveda*, *Saktu* i.e., the powder of *Apamarga* is used in *Hawan* for the purpose of *Rakshoghna* property. It has got property like *Papanashan*, *Mritunashana* and *Duhswapnnanasana*. *Kushtha* is known to be *paaproga*. This indicates towards the *Kushthaghna* property of *Apamarga*. *Duhswapnnanashana* indicates its *Medhya* property³.

Atharvaveda refers *Apamarga* at about eleven places. It considers this drug as the Lord of all plants on earth because it can increase life span by wiping away all the diseases. *Apamarga* is useful to cure diseases caused by thirst and hunger, defects of the organs, speech; sterility, physical debility and all other ailments⁴. In addition, *Atharvaveda* describes that *Apamarga* can sweep away chronic diseases, the evil habit of using foul language and also the ailments which cause severe pain as well as decrease in vitality⁵. About the same plant *Atharva veda* at one context mentions that

“The life giving one I have brought the famous plant of *Kanva*, the all healing one, may it quench this man’s unseen maladies”⁶. *Atharva veda* has all praise to *Apamarga* that it can remove all the *Doshas* and cleanses sins from the body⁷. It is also said in *Atharva veda* that, if people have dined with the cripple whose teeth are black and nails deformed this plant can eliminate all that *Doshas* away from them⁸.

Apamarga in Brahman Granthas:

- ***Sathpatha Brahman-*** In *Sathpath Brahman* *Apamarga* plant is known for wiping away the *Rakshas* in the quarters. *Apamarga* grains are asked to be taken in the dipping spoon of *Palasa* (*Butea monosperma*) or *Vikankat* (*Flacourtia sapida*) wood. *Apamarga* is also known for wiping away sin, guilt, witchery, infirmity etc⁹.
- ***Taitariya Brahman-*** In *Taitariya Brahman* it is mentioned that *Apamargahoma* is done to eliminate *Rakshasa Krimi*. This indicates towards its antimicrobial property¹⁰.

Apamarga in Purana

- ***Garuda Purana-*** Several references of *Apamarga* is found here. The root of *Apamarga* is tied with a red thread on Sunday and rolled seven times around the waist of the patient suffering from *Jwara*¹¹. The root of *Apamarga*, *Saindhav lavana*, *Sarsap taila*, *Dugdha* and *Kaanji* is crushed in *Tamra-patra* and its *Anjana* is applied in the eyes, which keeps the eyes clean¹². The root of *Apamarga* along with *Samudra lavana* cures *Ajirna-Shoola*¹³. *Apamarga* is used as *Dantdhavan* along with other plants like *Kadamba*, *Bilva* etc¹⁴.
- ***Brahmvaivarta Puran-*** This text is divided in to 4 *Khand* i.e *Brahma Khand*, *Prakriti Khand*, *Ganpati Khand*, and *Shri Krishna janma Khand*. In *Brahma Khand* *Apamarga* is said to be one of the best *Dantdhavan dravya*¹⁵.
- ***Skanda Puran, Kurma purana-*** Twigs of *Apamarga* is mentioned as *Dantdhavan dravya* along with other drugs^{16, 17}.
- ***Bhavisya Purana-*** In this text *Apamarga* along with other drugs are indicated in curing the ill effects of *visha*¹⁸.

Table No. 1 Showing References of Apamarga in various Samhitas.

S. No	Text	References
1.	Caraka Samhita	Sutra sthana 1/82-86,2/3-6, 2/33,4/26,4/23,4/35,25/40 Vimana Sthana 7/19-20,8/135, Chikitsa sthana 7/12-25,8/175-177,9/66-67,10/18-24,10/43-44,12/23,13/169-171
2.	Susrutha Samhita	Sutra sthana 2/22, 10/50, 11/12, 16/21, 16/36, 39/6 , 2/22 Chikitsa sthana 4/32, 6/15, 7/22, 14/13, 17/25, 22/25, 24/5, 24/12, 25/14-15, 25/25. Kalpa sthana 2/45, 5/69, 5/75, 6/2, 8/54, 6/106.
3.	Astanga sangraha	Sutra sthana 14/2,14/5, 15/17, 15/32, 16/22, Chikitsa sthana 5/82, 5/88, 6/45, 7/107, 13/17, 16/15, 17/34, 22/28, 24/6 Uttara tantra 4/2, 28/22, 30/45, 40/56, 40/69, 40/100, 42/25, 42/37, 42/62,45/31
4.	Astanga hridaya	Sutra sthana 10/28-29, 15/4, 5/26, 30/8-10, Sarira sthana 1/39, chikitsa sthana 13/126, 5/78-79, 3/133, 8/104-107, 8/168, 11/18-20, 11/31, 15/46, 19/75, 19/86 Uttara tantra 1/46, 7/20, 9/29-30, 22/63, 24/10, 30/33, 35/21-22, 36/7, 37/73.

Apamarga Position in Nighantus:

- **Dhanvantari Nighantu** : Guduchyadi varga¹⁹
- **Madan Pal Nighantu** : Abhayadi varga²⁰
- **Kaiyadeva Nighantu** : Oushadi varga²¹
- **Bhav prakash nighantu** : Guduchyadi varga²²
- **Raj Nighantu** : Shatahwadi varga²³

DESCRIPTION²⁴

Achyranthes aspera Linn is an erect or semi erect much branched diffuse biennial shrub growing half to one meter in height (occasionally attaining a height of two meters) with terete or bundly quadrangular pubescent branches thickened just above the nodes, bearing simple, opposite, orbicular-obovate or elliptic, usually obtuse slightly thick green tomentose herbaceous leaves, up to 10 cm in length and 1.5 cm in width and long tender terminal spikes reaching up to 45 cm in height.

- Root – Cylindrical tap root, slightly ribbed, 0.1-1.0 cm in thickness, gradually tapering, rough due to presence of some root scars, secondary and tertiary roots present, yellowish-brown; odour, not distinct.
- Stem – 0.3 – 0.5 cm in cut pieces, yellowish-brown, erect, branched, cylindrical, hairy, solid, and hollow when dry.
- Leaf – Simple, subsessile, exstipulate, opposite, decussate, wavy margin, obovate, slightly acuminate and pubescent due to the presence of thick coat of long simple hairs.
- Flower – Arranged in inflorescence of long spikes, greenish-white, numerous, sessile, bisexual, actinomorphic, hypogynous; perianth segments 5, free, membranous, contorted or quincuncial, stamens 5, opposite the perianth lobes, connate forming a membranous tube-like structure, alternating with truncate and fimbriate staminodes, filament short; anther, two celled, dorsifixed; gynoecium bicarpellary, syncarpous; ovary superior, unilocular with single ovule; style, single; stigma, 48-ollet.
- Fruit – An indehiscent dry utricle enclosed within persistent, perianth and bracteoles,
- Seed – Sub-cylindric, truncate at the apex, round at the base, endospermic, brown.

Microscopic:

- Root – Mature root shows 3-8 layered, rectangular, tangentially elongated, thin walled cork cells; secondary cortex consisting of 6-9 layers, oval to rectangular, thin walled, parenchymatous cells having a few scattered single or groups of stone cells; followed by 4-6 discontinuous rings of anomalous secondary thickening composed of vascular tissues; small patches of sieve

tubes distinct in phloem parenchyma, demarcating the xylem rings; xylem composed of usual elements; vessels simple pitted; medullary rays 1-3 cells wide; small prismatic crystals of calcium oxalate present in cortical region and numerous in medullary rays.

- Stem – Young stem shows 6-10 prominent ridges, which diminish downwards upto the base where it becomes almost cylindrical; epidermis single layered, covered by thick cuticle having uniseriate, 2-5 celled, covering trichomes and glandular with globular head, 3-4 celled stalk; cortex 6-10 layered, composed of parenchymatous cells, most of them containing rosette crystals of calcium oxalate; in the ridges cortex collenchymatous; vascular bundles lie facing each ridge capped by pericyclic fibres; transverse section of mature stem shows lignified, thin-walled cork cells; pericycle a discontinuous ring of lignified fibres; vascular tissues show anomalous secondary growth having 4-6 incomplete rings of xylem and phloem; secondary phloem consisting of usual elements form incomplete rings; cambial strip present between secondary xylem and phloem; secondary xylem consisting of usual elements, fibres being absent; vessels annular, spiral, scalariform and pitted, fibres pitted, elongated, lignified; pith wide consisting of oval to polygonal, parenchymatous cells; two medullary bundles, either separate throughout or found in some cases, present in pith; micro-sphenoidal silica crystals present in some epidermal, cortical and pith cells.
- Leaf-Petiole – Shows crescent-shaped outline, having single-layered epidermis with thick cuticle; ground tissues consisting of thin-walled, parenchymatous cells containing rosette crystals of calcium oxalate; 4-5 vascular bundle situated in mid region. Midrib – Shows a single layered epidermis, on both surfaces; epidermis followed by 4-5 layered collenchymas on upper side and 2-3 layered on lower side; ground tissue consisting of thin-walled, parenchymatous cells having a number of vascular bundles; each vascular bundle shows below the xylem vessels, thin layers of cambium, followed by phloem and a pericycle represented by 2-3 layers of thick-walled, non-lignified cells; rosette crystals of calcium oxalate found scattered in ground tissues. Lamina – Shows single layered, tangentially elongated epidermis cells covered with thick cuticle having covering trichomes which are similar to

those of stem found on both surfaces; mesophyll differentiated into palisade and spongy parenchyma; palisade 2-4 layered of thick parenchyma larger, slightly elongated in upper, while smaller and rectangular in lower surface; spongy parenchyma 3-5 layers thick, more or less isodiametric parenchymatous cells; idioblast containing large rosette crystals of calcium oxalate distributed in palisade and spongy parenchyma cells; stomata anisocytic and anomocytic in both surface; stomatal index 4.5-9.0 on upper surface, 9.0-20.0 on lower surface; palisade ratio 7.0-11; vein is let number 7-13 per sq. mm.

- Powder – Light yellow; shows fragments of elongated, rectangular, thin-walled epidermal cells, aseptate fibres, vessels with annular, spiral, scalariform and pitted thickening, uniseriate hair with bulbous base, rosette and prismatic crystals of calcium oxalate.

AYURVEDIC PROPERTIES²⁵:

- **Rasa** - *Katu, Tikta*
- **Guna** - *Ruksha, Laghu, Tikshna*
- **Virya** - *Ushna*
- **Vipaka** - *Katu*
- **Karma** - *Kaphahara, Vatahara, Medohara, Chedana, Deepana, Pacana, Vamaka, Sirovirecana*
- **Doshaghnata** - *Tridoshashamaka*

Rogaghnata:

Siroroga, Kustaroga, Rajayakshma, Unmada, Vranashotha, Udara Swasa, Hikka, Kasa, Mutravardha, Krimi, Basmaka

Important formulations

Apamargakshara, Apamarga Taila, Abhaya Lavana, Gudapippali, Jyotishmati Taila

Dose:

- ✓ 20-50 g of the drug for Decoction²⁶
- ✓ 2-8 Ratti as Kshara²⁷

MAJOR CHEMICAL CONSTITUENTS²⁸:

Chemical investigations of the seeds of *Achyranthes aspera* by V. Hariharan & S. Rangaswami and M. Ali reported the isolation & identification of Saponins A and B. Saponin A was identified as D-Glucuronic Acid and saponins B was identified as β -Dgalactopyranosyl ester of D-Glucuronic Acid. Along with these constituents certain other constituents were also isolated like oleanolic acid, amino acids and hentriacontane. The seeds also contain chemical constituents like 10-tricosanone, 10-octacosanone & 4-tritriacontanone.

IDENTITY, PURITY AND STRENGTH²⁹

- **Foreign matter** : Not more than 2%
- **Total ash** : Not more than 17%
- **Acid insoluble soluble ash** : Not more than 5%
- **Alcohol(90%) soluble extractive** : Not less than 2%
- **Water soluble extractive** : Not less than 12%.

PHARMACOLOGICAL ACTIVITIES:

- **Analgesic and antipyretic activity:** Sutar N.G. et al (2008)³⁰ reported methanolic extract of leaves for analgesic and antipyretic activities by using hot plate and brewer's yeast induced methods using aspirin as a standard drug. Both leaves and seeds show analgesic activity in mice using acetic acid induced writhing response and hot plate method.
- **Anti-allergic Activity:** S.B. Datir et al (2009)³¹ reported that the petroleum ether extract (200 mg/kg, i.p.) of the plant shows significant antiallergic activity in both milk induced leukocytosis and milk induced eosinophilia in mice.
- **Anti-inflammatory and anti-arthritic activity:** The alcoholic extracts of leaves and seeds show anti-inflammatory activity in rats using carrageenan-induced paw edema method and formalin model³².
- **Antimicrobial Activity:** M.T.J. Khan et al(2010)³³ reported that the ethanol and chloroform extracts of seeds of *Achyranthes aspera* shows mild to moderate antibiotic activity against *B. subtilis* and *E. coli*. T.N. Misra et al (1992)³⁴ reported 17-pentatriacontanol as a chief constituent isolated from essential oil of the shoots

of plant, the oil shows antifungal activity against *Asperigillus carneus*. S. Sharma et al. studied the alcoholic extract which shows the presence of the triterpenoid saponin with dose dependent inhibitory activity against *Staphylococcus aureus*.

- **Anti-oxidant Activity:** D.S. Gayathri et al (2009)³⁵ reported antioxidant activity on leaves and roots. T. Malarvili & N. Gomathi reported antioxidant activity on seeds of the plant. S. Edwin et al reported free radical scavenging activity of the ethanolic and aqueous extracts.
- **Nephroprotective Activity:** T. Jayakumar et al (2009)³⁶ reported the methanolic extract of the whole plant of *Achyranthes aspera* shows nephroprotective activity against lead acetate induced nephrotoxicity in male albino rats.
- **Anti-depressant Activity:** C.C. Barua et al³⁷ (2009) showed that Methanolic extract of the leaves of *Achyranthes aspera* shows anti-depressant effect in mice and rats using forced swimming test in mice and rats and tail suspension test in rats.
- **Antiparasitic Activity:** Zahir et al (2009)³⁸ reported that the ethyl acetate extracts of *A. aspera* shows antiparasitic activity (dried leaf, flower and seed extract) against the larvae of cattle tick *Rhipicephalus (Boophilus) microplus*, sheep internal parasite *Paramphistomum cervi*.
- **Bronchoprotective Activity:** B.R. Goyal et al (2007)³⁹ reported ethanolic extract of *Achyranthes aspera* shows broncho-protective effect in toluene diisocyanate (TDI) induced occupational asthma in Wistar rats.
- **Cancer Chemo preventive Activity:** Chakraborty et al (2002)⁴⁰ reported that the methanolic extracts of leaves, alkaloid, non-alkaloid and saponin fractions shows cancer chemo preventive action on Epstein- Barr virus, early antigen activation induced by tumor promoter 12-O-tetradecanoylphorbol-13-acetate.
- **Cardiovascular Activity⁴¹ :** Achyranthine, a water-soluble alkaloid isolated from *Achyranthes aspera*, decreased blood pressure and heart rate, dilated blood vessels, and increased the rate and amplitude of respiration in dogs and frogs. The contractile effect of the alkaloid at 0.5 mg/ml on frog rectus abdominal muscle was less than that of acetylcholine (0.1 mg/ml), and its spasmogenic effect was not blocked by tubocurarine.

- **Diuretic Activity:** S.S. Gupta et al (1972)⁴² reported a saponin isolated from the seeds of *Achyranthes aspera* which shows significant diuretic effect in adult male albino rats. Achyranthine (5 mg/kg, orally) had diuretic activity in rats.
- **Hepatoprotective Activity:** A.R. Bafna & S.H. Mishra (2004) reported that the methanolic extract of the aerial parts of *Achyranthes aspera* shows hepatoprotective activity on rifampicin induced hepatotoxicity in albino rats. Methanolic extract showed dose dependent decrease in the levels of SGPT, SGOT, ALKP and total bilirubin⁴³.
- **Hypoglyceamic Activity:** M.S. Akhtar & J. Iqbal (1991) studied the aqueous and methanolic extracts of the powdered whole plant, which shows hypoglyceamic activity⁴⁴.
- **Hypolipidemic Activity:** A.K. Khanna et al (1992) investigated the alcoholic extract of *A. aspera*, at 100 mg/kg dose lowered serum cholesterol (TC), phospholipid (PL), triglyceride (TG) and total lipids (TL) levels by 60, 51, 33 and 53% respectively in triton induced hyperlipidemic rats. The chronic administration of this drug at the same doses to normal rats for 30 days, lowered serum TC, PL, TG and TL by 56, 62, 68 and 67% respectively followed by significant reduction in the levels of hepatic lipids⁴⁵.
- **Immunomodulatory Activity:** R. Chakrabarti & R.Y. Vasudeva (2006) reported that *Achyranthes aspera* show immuno-stimulant action in *Catla catla*⁴⁶.
- **Wound Healing Activity:** S. Edwin et al⁴⁷ investigated the ethanolic and aqueous extracts of leaves of *Achyranthes aspera* for wound healing activity. The wound healing activity was studied using two wound models, excision wound model and incision wound model .

PHARMACEUTICAL STUDY

Preparation of *Apamarga kshara* includes various steps like collection and authentication of the plant, drying, preparation of ash and finally preparation of *kshara*.

Collection of *Apamarga panchanga*

Fresh matured *Apamarga panchanga* (whole plant of *Achyranthes aspera*) was collected during the month of September. Authentication of *Apamarga* was done by the experts of *Dravyaguna* on the basis of its pharmacognostical characters (Authentication no: RUBL211605). It was then dried completely under for one week.

Preparation of *Apamarga kshara*

- **Date of Commencement** : 4/10/2016
- **Date of Completion** : 16/10/2016
- **Reference** : API Part 2 Vol 1
- **Equipments** : Iron pan, Stainless steel vessels, muslin cloth, sieve, glass beaker, weighing machine, Gas stove, spatula, mortar and pestle.

Apamarga kshara was prepared following the classical method. Whole process was divided into three phases.

1. Preparation of ash

Matured *Apamarga Panchanga* (40 kg) was collected and dried completely in sunlight for one week. After removing the physical impurities; dried *Panchanga* (17.4 kg) was burnt completely by placing it in a big iron pan in open air.

2. Preparation of *Ksharajala*

White ash (2.175kg) was taken in a stainless steel vessel. Instead of adding 6 times water (i.e. 13.05 litres) at a time and filtering the supernatant liquid three successive filtrations were carried out for better yield. Out of 13.05 L RO water, 6L water was added to the white ash for first wash. Then the mixture of ash and water was rubbed with hands for proper mixing and left undisturbed for overnight. Next day

the clean supernatant liquid was decanted through IV set and then it was filtered through a double layered sterilized cloth. The filtering process was repeated for twenty one times and the filtrate was kept separately in a stainless steel vessel. To the residual ash again 4L RO water was added (out of the remaining 7.05 L) rubbed properly and allowed to stand undisturbed overnight, followed by the collection of second filtrate. Remaining amount of water (3.05L) was added to residual ash and the same method was followed for the 3rd time to collect the third filtrate.

3. Preparation of Kshara

All the three filtrates (of *Ksharajala*) were separately subjected to heat over the gas stove to evaporate the water content and to obtain *Kshara*. . It was stirred continuously to prevent bumping and sticking at final stage. Finally a white coloured *Kshara* deposited as flakes from the bottom of the vessel was collected and was ground in to a fine powder. It was then packed in tightly closed container to protect from light and moisture.

OBSERVATION AND RESULT

- *Apamarga panchanga* burned quickly and easily as it was completely dried.
- The powder of ash obtained was whitish with a characteristic taste.
- After addition of water, *kshara jala* tasted salty, and was yellowish in colour.
- A IV set was used to collect maximum volume of *Ksharajala* without disturbing sediment part.
- On heating evaporation starts, as temperature increased the yellowish liquid slowly turned to brownish semisolid mass with aggregation and creaking sounds.
- On continuous heating bumping was observed and the brownish semisolid mass started adhering to the walls of vessel. It was stirred continuously to prevent bumping and sticking.
- In the final stage semisolid mass changed to white powder form.
- Repeated washing instead of adding 6 times water at once helped in obtaining maximum yield of *kshara*.

Table No. 1:**Observations and results obtained during preparation of *Apamarga* ash**

1.	Weight of fresh <i>Apamarga Panchanga</i>	40 kg
2.	Weight of dried <i>Apamarga Panchanga</i>	17.4.kg
3.	Loss of weight after drying	22.6 kg
4.	Quantity of <i>Apamarga</i> ash obtained	2.175kg
5.	Percentage of <i>Apamarga</i> ash	12.5%

Table No. 2:**Observations and results obtained during preparation of *Apamarga kshara***

	First wash	Second wash	Third wash	Total Three washes
Quantity of water added	6L	4L	3.05L	13.05 L (6 times)
<i>Apamarga Kshara</i> obtained	496.6g	232.8g	77.6g	807g
Percentage of <i>Apamarga kshara</i>	22.4%	10.5%	3.5%	36.4%

ANALYTICAL STUDY

Ayurveda has been serving the ailing population since centuries and is still catering to the health needs of a large population of the world. A key obstacle which has hindered the acceptance of this traditional system of medicine in the developed countries is the lack of documentation and rigorous quality control.

Any medicine is always mandatory to be of highest quality, and hence to check the quality of the finished products and to prove the safety of the drugs on the basis of scientific evidence, it has become essential to develop reliable and specific and quality control methods using a combination of classical and modern instrumental method of analysis. Standardization is an essential measurement for ensuring the quality control of the herbal drugs. The term “Standardization” is used to describe all measures, which are taken during the manufacturing process and quality control leading to a reproducible quality.

Since the quality of final product depends on the raw material selected, standardization should not be limited to the final product alone. Quality assurance of raw material and in process standardization is also equally important. Geographical and seasonal variations of the raw drug make the analytical study a herculean task. Also the herbal drugs, singularly and in combinations, contain numerous compounds in complex matrices in which no single active constituent is responsible for the overall efficacy. This again creates another challenge in establishing quality control standards and standardization of herbal drugs. With this backdrop, an attempt has been made to lay down the standards for the trial drug *Mridu Apamarga kshara*, *Apamarga* -whole plant used for *kshara* preparation and *Apamarga* ash.

Analytical parameters-

Parameters were taken according to “Protocol for testing of *Ayurvedic*, *Siddha*, and *Unani* Medicines” published by Government Of India, Department of *Ayush*, Ministry of Health and Family Welfare, and Pharmacopoeial Laboratory For Indian Medicines, Ghaziabad. The tests were carried out at S.R Labs, Jaipur.

Apamarga -whole plant, *Apamarga* ash and *Apamarga kshara* were subjected to various analytical parameters as follows.

- Organoleptic parameters like *Color, Odor, Taste, Appearance*
- Physico-chemical parameters like Loss on drying, Ash values, pH, Extractive values
- Assay for Sodium, Potassium and Iron
- TLC (whole plant)

Table No. 1: Analytical Parameters of *Apamarga*- Whole plant

Sl. No.	Parameters	Limits	Results
1.	Foreign matter	Not more than 2%	1.24%
2.	Moisture content / LOD	-	5.597%
3.	Total Ash	Not more than 17%	10.163%
4.	Acid insoluble Ash	Not more than 5%	0.728%
5.	Water soluble Ash	-	5.114%
6.	Alcohol soluble extractive	Not less than 2%	4.976%
7.	Water soluble extractive	Not less than 12%	15.276%

Table No. 2: TLC Analysis of *Apamarga* –whole plant

Rf values	254 nm- 0.24, 0.34, 0.46,0.62,0.69,0.80
	366nm- 0.33,0.44,0.46,0.6,0.61,0.64,0.66
	Visible – 0.26,0.46,0.62,0.69,0.70,0.8,0.88

Table No. 3: Organoleptic characters of *Apamarga* ash

Appearance	Free flow powder
Colour	Greyish
Taste	-
Odour	None

Table No. 4: Analytical Parameters of *Apamarga* ash

Sl. No.	Parameters	Results
1.	Moisture content / LOD	5.84% w/w
2.	Acid insoluble Ash	8.22% w/w
3.	pH value(10%w/v)	9.82
4.	Sodium content(Na)	16.43 % w/v
5.	Potassium content(K)	1.84% w/v
6.	Iron content (Fe)	0.24% w/v

Table No. 5: Organoleptic characters of *Apamarga kshara*

Appearance	Fine powder
Colour	White
Taste	Salty
Touch	Slimy
Odour	Faint

Table No. 6: Analytical Parameters of *Apamarga kshara*

Sl. No.	Parameters	Limits	Results
1.	Particle size #100	Not less than 80%	88.43% w/w
2.	Moisture content / LOD	Not more than 80%	3.18 % w/w
3.	Acid insoluble Ash	Not more than 1%	0.94 % w/w
4.	pH value(10%w/v)	10-11	10.72
5.	Sodium content(Na)	Not less than 4%	4.25 % w/v
6.	Potassium content(K)	Not less than 29%	37.98% w/v
7.	Iron content (Fe)	Not less than 1.2%	1.22% w/v



Fig 1: Wet Apamarga Panchanga



Fig 2: Apamarga Ash



Fig 3: Preparation of Ksharjala and filtration

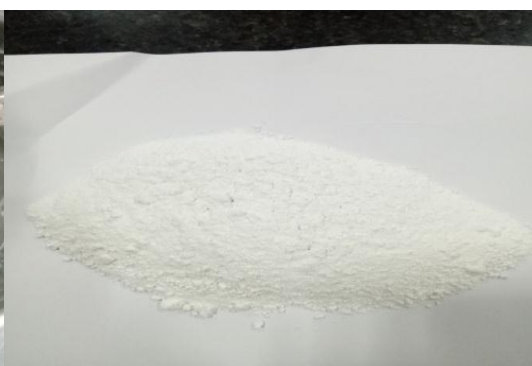


Fig 4: Evaporation of ksharjala/filtrate Fig 5: Final yield (Apamargakshara)

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RESEARCH METHODOLOGY

INTRODUCTION:

The disease *Karnini* is considered in *Ayurveda* as one of the *Yonivyapad* and is caused by vitiation of *Vata*, *Kapha* and *Rakta* and is related to disease of reproductive tract. Further it is explained as a *Mamsakandi* or *Mamsankura granthi*. i.e. a muscular tuberos projection or a bulbous structure resembles like knot in shape, origin from the cervical orifice as it has been named cervical erosion in the modern medicine.

The treatment of *Karnini* is still a challenge to the Gynecologists except cervical cauterization for time being, permanent cure cannot be assured in all cases with any modern drug known today for its treatment.

Karnini Yonivyapad when left untreated it leads to the formation of deep seated *vrana* (ulceration) in the *garbhashayamukha* and presents with more bright red, deep seated ulceration over the cervix called as *Garbhashaya mukhagatavrana*. This can be considered as chronic stage of cervical erosion.

Thus, in view of the importance and its day to day occurrence in the population it was planned to evaluate clinical study with traditional medicine i.e. *Apamarga pratisaraniya kshara* in the management of *Karnini* (Cervical erosion), which might prove helpful for suffering humanity.

AIM

- To evaluate and compare the effect of *Apamarga Pratisaraniya Kshara* and Electric cauterization in Cervical Erosion (*Karnini*).

OBJECTIVES

1. To evaluate the effect of *Apamarga Pratisaraniya Mridu Kshara* in Cervical Erosion (*Karnini*).
2. To evaluate the effect of Electric cauterization in Cervical Erosion (*Karnini*).
3. To compare the effect of *Apamarga Pratisaraniya Mridu Kshara* and Electric cauterization in Cervical Erosion (*Karnini*).

MATERIALS AND METHODS:

Materials:

1. The prepared *Apamarga pratisaraniya mridu Kshara* and Electirc Cautery were used.

Methods:

Study design : The study design was planned as Randomized single blind comparative study.

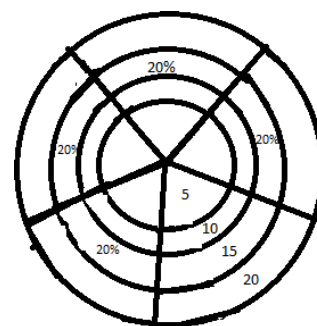
1. Study type : Interventional study
2. Intervention model: Two group assignment
3. Allocation : Randomized allocation – Chit method was followed.
4. Masking : Single blind was adopted for the study
5. Study Site : OPD & IPD of department of Prasuti Tantra & Stri Roga, National Institute of Ayurveda, Jaipur

Ethical clearance:

The Ethical clearance was obtained from the Institutional Ethical committee of National Institute of Ayurveda, Jaipur as well as Tilak Maharashtra Vidyapeeth, Pune Vide Ir. Nos. IEC/ACA/2017/6, Dated: 26-04-2017 and Ayu/16/202, Dated: 28-01-2016, prior to the trial of the study.

INCLUSION CRITERIA:

- Patients presents with the signs and symptoms of *Karnini* (cervical erosion) and clinically confirmed on per speculum examination.
- Married women irrespective of parity
- Age between 18 to 45years
- Cervical area covered with erosion more than 25 % are included in the study



EXCLUSION CRITERIA:

- Pregnant women.
- Positive patients of HIV, VDRL and HBsAg.
- Patients with IUCD insertion or on Oral contraceptive pills.

- Any organic pathology of reproductive tract like endometrial cancer, cervical cancer, cervical intraepithelial neoplasia.
- Systemic disorders like Diabetes, Hypertension, Tuberculosis etc.
- Patients with Menorrhagia, Metrorrhagia and Polymenorrhoea.

WITHDRAWAL CRITERIA:

- Development of any major ailment, side effects necessitating with other modalities of treatment.
- Worsening of symptoms.
- Patient's failure to report for follow-up or irregular medication.
- Inter current illness.
- Not 100% compliance.

CLINICAL METHODS: (History and Clinical examination)

To document the clinical findings a detailed clinical research proforma was designed and accordingly parameters were documented before and after treatment. After taking voluntarily informed consent, history and examinations were done, trial started and then proceeded for respective procedure.

A) Detailed history of Subjects

- All registered patients were enquired for details about their chief complaints along with duration, history of present and past illness especially any STD's and family history. Special attention was paid to age of marriage, menstrual history, obstetrical and contraceptive history.
- Complete demographic profile viz. age religion, address, occupation, socioeconomic status, education, marital status etc., of each patient was recorded.
- Status of *Agni* and *Koshta*, any addiction, personal hygiene and sleep pattern were also enquired in detail and were recorded.

B) Clinical examination of patient**1) General examination**

- General examination of each subject was carried out to note vital signs like pulse rate, temperature, blood pressure etc.
- *Ayurvedic* parameters - *Ashtavidha* and *Dashavidha pariksha* are also documented.

2) Systemic examination

Systemic examination of each subject was done carefully to exclude cardiovascular, respiratory, renal, neurological and gastrointestinal disorders. All findings were recorded in the clinical research format.

3) Gynecological examination

- Local examination-** Local examination was carried out to exclude lesions of external genital organs.
- Per speculum** –Visualization of vagina and cervix was done through speculum to find out abnormality like signs of inflammation, discharges etc. and appearance of cervix, touch on bleeding, Nabothian cyst or polyp.

4). Papsmear: Before starting the trial, cervical smear was taken with Ayre's spatula by 360 degree rotating around the external os in clockwise direction. After doing the fixation sent for examination to rule out any dysplasia or carcinoma.

Precaution: Patients advised not to douche or intercourse before the day of smear.

5). pH of vagina: The vaginal pH was tested by using pH indicator strip before trial.

LABORATORY INVESTIGATIONS

Before Treatment:

- Blood
 - Hb %, TLC, DLC, ESR
 - HIV, VDRL, HBsAg
 - Blood Sugar – Fasting, Postprandial
- Urine -Routine and microscopic examination
- Papsmear
- Vaginal swab C/S
- Vaginal pH
- USG of pelvis

7. Colposcopy (where ever necessary)

RECRUITEMENT OF THE CASES:

Initially 216 patients were selected for the purpose, out of them 16 patients were dropped out since they were failed to continue treatment up to final round follow up; and thus final sample contain only 200 patients. These patients were administered randomly into two groups, making sure that half of the cases were allocated to Group I and II. At the end of the study the groups were decoded as A and B.

- Group A: In this group patients were undergone electric cauterization.
- Group B: In this Group patients undergone *Apamarga pratisaraniya mridu kshara* externally.
- At the end of the study sample contained the number of cases as under:

Table No. 1. Showing number of patients involved in the trial:

Group	No. of patients initially	No. of patients finally	Percentage
A	109	100	50%
B	107	100	50%

SAMPLE SIZE CALCULATION

The sample size was calculated as per the following simple formula (Daniel, 1999)

$$\frac{N=Z^2P(1-P)}{d^2}$$

- n = sample size
- Z = Z statistic for a level of confidence
- P = expected prevalence or proportion (in proportion of one;
- if 20%, P = 0.2) d = precision (in proportion of one; if 5%, d = 0.05)

$$N = \frac{1.96^2 \times 0.85 (1-0.85)}{0.05^2} = 195.92$$

Definite sample of the Study : 200

Method of application of trial drug:

Apamarga pratisaraniya Mridu Kshara was applied after keeping the patient in a lithotomy position by using Cusco's speculum after following all aseptic precautions and draping. *Kshara* was left in-situ for hundred *Matra Kala*. Then cervix was cleaned with *Triphala* decoction. The procedure was repeated on alternate days for 3 sittings for two cycles, starting from fifth day of menstruation.

Procedure of Electric Cautery:

Cauterization done on cervical erosion as per the above mentioned method by linear radial strokes initiating from inwards to outwards of the eroded area. The strokes were given at a distance of 1cm and in 2 mm deep.

CRITERIA OF ASSESSMENT**I. Subjective Parameters:**

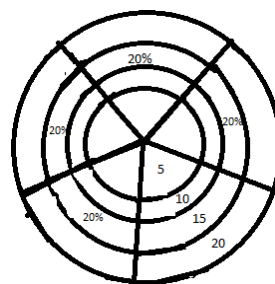
Parameter	Gradation
1. Yonigata srava - Normal - No discharge - Mild - Slight wetting of under garments on/off - Moderate - Wetting of undergarments - Severe - Excessive discharges from vagina	0 1 2 3
2. Low backache** - Absent - Mild - No interference with daily routine - Moderate - Backache during any effort and forward bending - Severe- Affect daily routine, no relief taking medicine ** Low back pain will be assessed with Visual analogue scale.	0 1 2 3
3. Dyspareunia - Absent - Mild - Mild Pain during coitus - Moderate - Moderate Pain during coitus - Severe pain - Patient tries to avoid coitus	0 1 2 3

4. Yonikandu - Absent - No <i>Kandu</i> - Mild – Occasional <i>Kandu</i> - Moderate - Disturbance and increase after specific time such as - menstruation and micturation etc. - Severe - Intolerable itching	0 1 2 3
5. Appearance of Post coital bleeding - Absent - No bleeding - Mild - Appearance of spotting - Moderate - Blood stained mucous discharge - Severe - Appearance of fresh blood discharge	0 1 2 3

II. Objective Parameters:

1.Measurement of erosion* - Erosion - 0% to 25% area of cervix - Erosion - 26% to 50% area of cervix - Erosion - 51% to 75% area of cervix - Erosion - 76% to 100 % area of cervix	0 1 2 3
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*Circle is divided in to 5 quadrants; each quadrant is divided in to 4 equal parts on the basis of Hammond's Graph of cervix² to record data of colposcopy findings (modified)



Extent of cervical erosion:

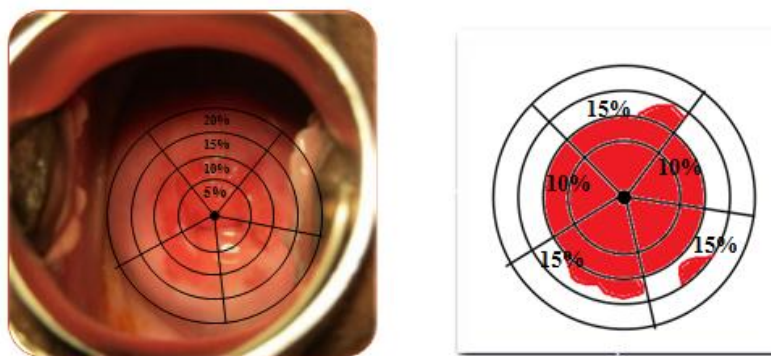
According to percentage scale system cervix was divided in to 5 quadrants and considered as 20% each and the external os to outside border percentage of eroded area was calculated.

Follow up:

Cases are followed at one week interval up to 4 weeks and then final assessment done after completion of one month.

MEASUREMENT OF EXTENT OF EROSION

Total extent of erosion = 65%

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OBSERVATIONS & RESULTS

PRESENTATION OF DATA

The data collected and analysed has been depicted in the following sequence:

1. General observations viz. age, sex, religion etc.
2. Results of therapy evaluated on the basis of improvement in subjective parameter as well as Subjective parameter.

OBSERVATIONS

A-Data of Registered Patients

Table No. 1: Group wise distribution of registered patients

Group	Registered	Drop out	Trial completed
Group-A	109	09	100
Group-B	107	07	100
Total	216	16	200

The study revealed that total 216 patients were registered. Out of them 200 patients were completed the treatment and 16 patients were discontinued. In Group-A, 109 patients were registered, out of them 100 patients were completed the course of the treatment and 09 patients were discontinued. In Group-B, total 107 patients were registered, out of them 100 patients were completed the course of the treatment and 07 patients were discontinued.

OBSERVATION ON DEMOGRAPHIC DATA

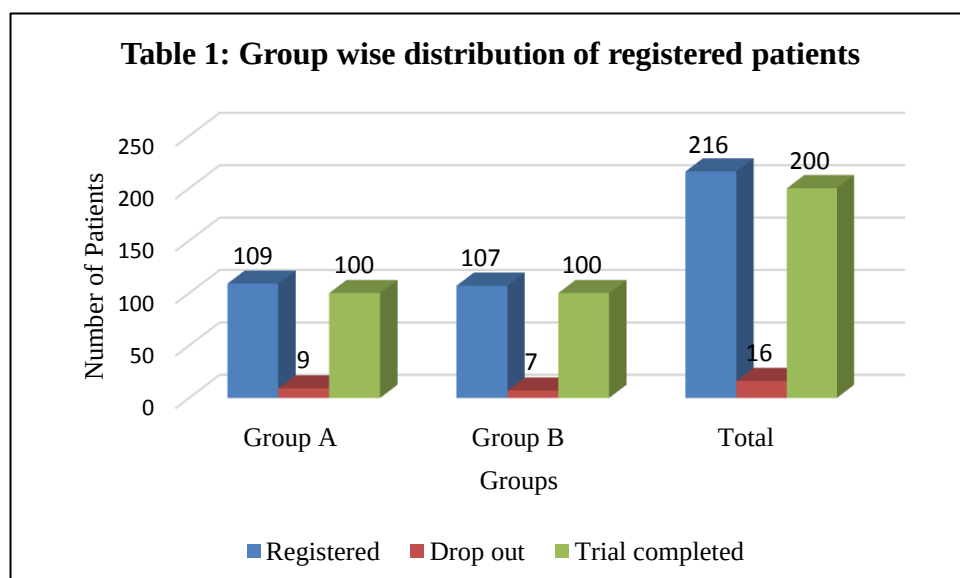


Table No. 2:**Age wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

AGE (years)	No. of Patients		Total	Percentage
	Group-A	Group-B		
18-20	00	00	00	00.00%
20-25	11	7	18	09.00%
25-30	24	38	62	31.00%
30-35	31	27	58	29.00 %
35-40	29	21	50	25.00%
40-45	5	7	12	06.00%
Total	100	100	200	100%

Above table shows that the maximum incidence of Cervical erosion i.e. 62 (31.00%) patients was found in age group ranging from 25-30 years followed by 58 (29.00%) patients were from age group 30-35 years. 50 (25.00%) patients were from age group ranging from 35- 40 years, 18 (09.00%) patients were from 20-25 years and 12 (06.00%) patients were from age group ranging from 40-45 years.

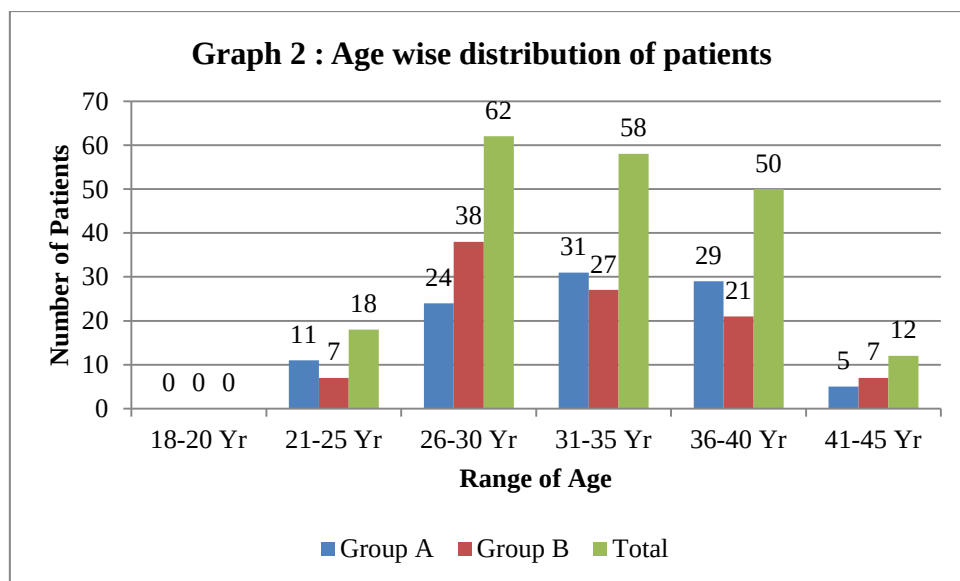


Table No. 3:**Habitat wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

Habitat	No. of Patients		Total	Percentage
	Group-A	Group-B		
Rural	91	87	178	89.00%
Urban	09	13	22	11.00%
Total	100	100	200	100%

On considering habitat wise distribution of patients, study reveals that maximum patients i.e. 178 (89.00%) patients were belonging from rural habitat, while 22 (11.00%) patients were belonging from urban area.

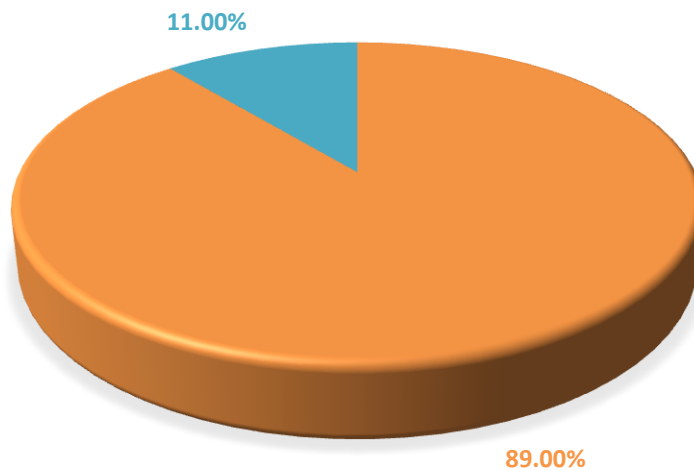
GRAPH 3: HABITAT WISE DISTRIBUTION

Table No. 4:**Religion wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

Religion	No. of Patients		Total	Percentage
	Group-A	Group-B		
Hindu	81	70	151	75.50%
Muslim	19	30	49	24.50%
Other	00	00	00	00 %
Total	100	100	200	100%

Out of 200 patients 151 (75.50%) patients were from Hindu community and 49 (24.50%) from Muslim community.

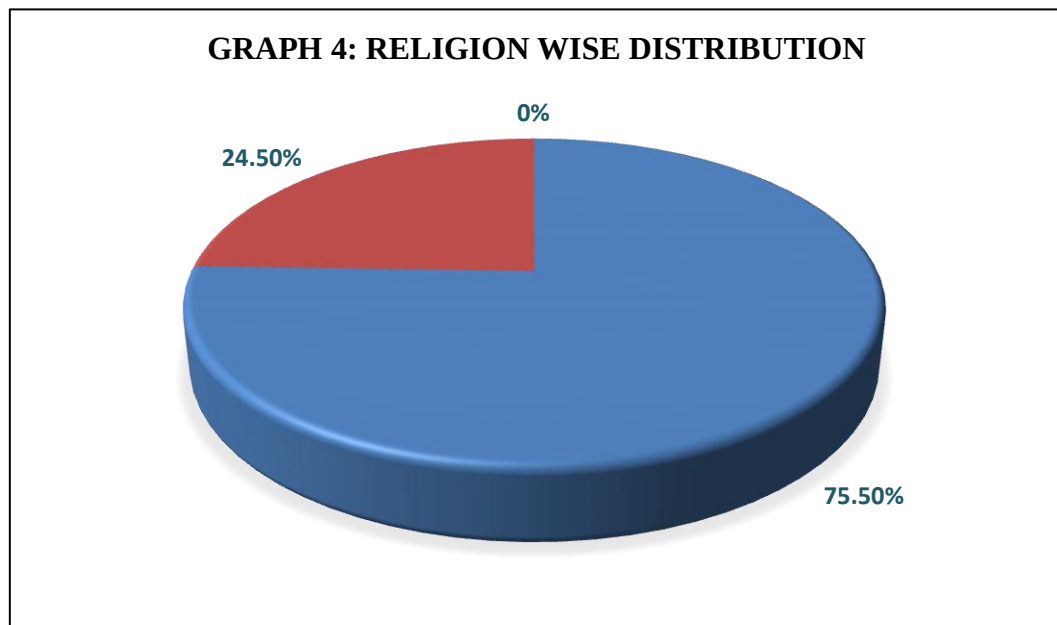


Table No. 5:**Marital status wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

Marital status	No. of Patients		Total	Percentage
	Group-A	Group-B		
Married	99	100	199	99.50%
Widow	01	00	01	00.50%
Divorcee	00	00	00	00 %
Total	100	100	200	100%

Out of total trial completed patients 199 (99.50%) patients were Married and only 01 (00.50%) was widow.

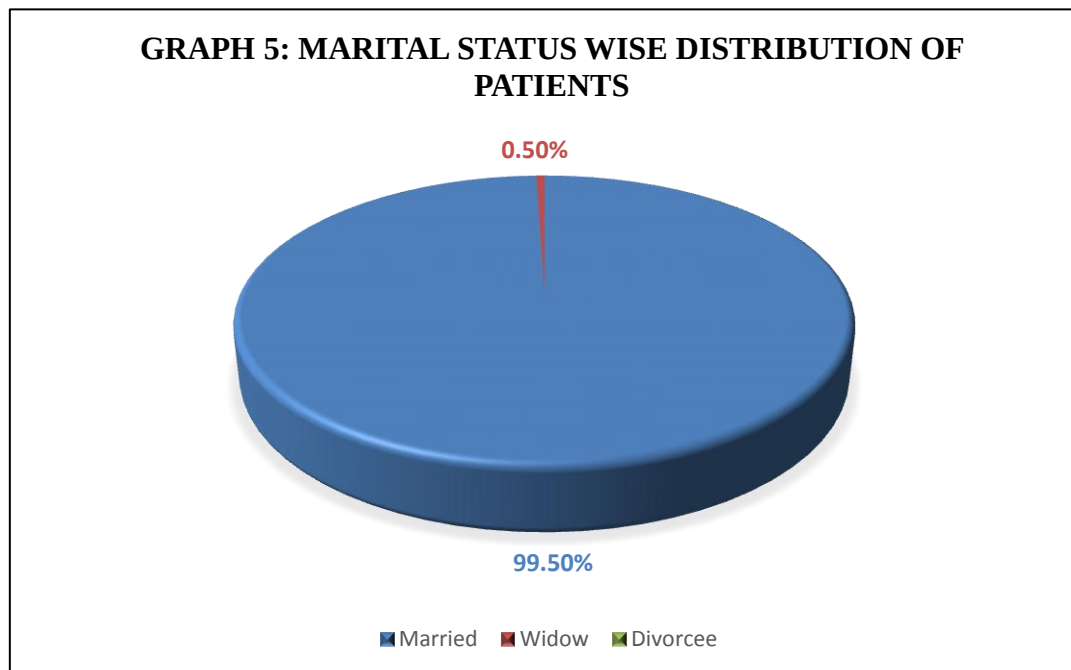


Table No. 6:**Education wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

Education	No. of Patients		Total	Percentage
	Group-A	Group-B		
Illiterate	25	24	49	24.50 %
Primary School	33	29	62	31.00 %
High school	23	22	45	22.50%
Intermediate	06	12	18	09.00%
Under graduate	09	11	20	10.00%
Post graduate	04	02	06	03.00%
Others	0	0	0	00.00 %
Total	100	100	200	100%

Prevalence of patients in this study shows that Primary school educated patients were maximum i.e. 62 (31.00 %), followed by 49 (24.50%) patients were Illiterate. 45 (22.50%) patients were having high school education, 20 (10.00%) patients Under graduate, 18 (09.00%) patients Intermediate whereas only 06 (03.00%) patients were Post Graduate.

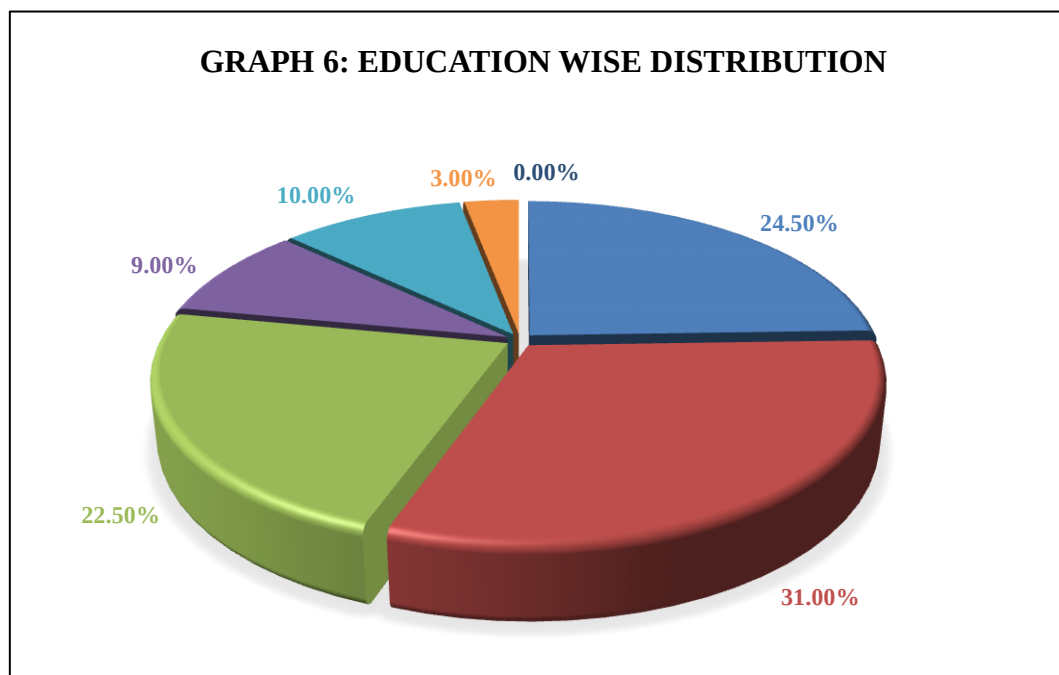


Table No. 7:**Occupation wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

Occupation	No. of Patients		Total	Percentage
	Group-A	Group-B		
Labour	06	12	18	09.00%
Student	00	00	00	0.00%
House wife	87	83	170	85.00%
Service	07	05	12	06.00%
Total	100	100	200	100%

On considering the nature of occupation, it was found that maximum patients 170 (85.00%) were Housewives. 18 (09.00%) were Labourers and 12 (06.00%) patients belong to Service class group.

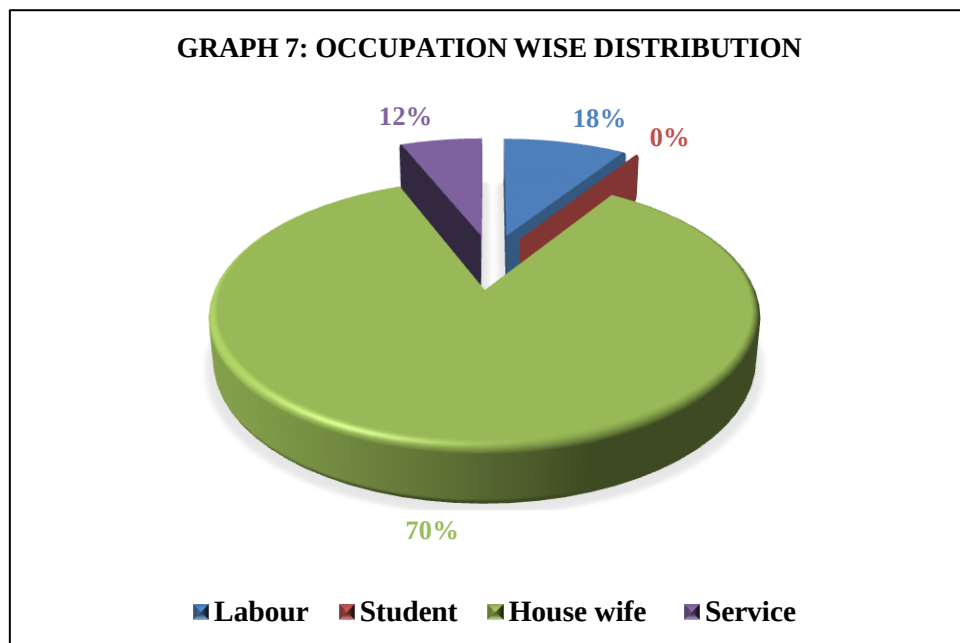


Table No. 8: Socio-economic status wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Socio-economic status	No. of Patients		Total	Percentage
	Group-A	Group-B		
Lower	12	16	28	14.00%
Lower Middle	68	68	136	68.00%
Middle	13	11	24	12.00%
Upper Middle	06	05	11	05.50%
Upper	01	0	1	00.50%
Total	100	100	200	100%

This study revealed that the maximum number of patients i.e. 136 (68.00%) patients were belonging from Lower middle class, followed by 28 (14.00%) patients were lower whereas 24 (12.00%) patients belonging from Middle class, 11 (05.50%) patients Upper Middle and only 1 (00.50%) patients were from Upper class.

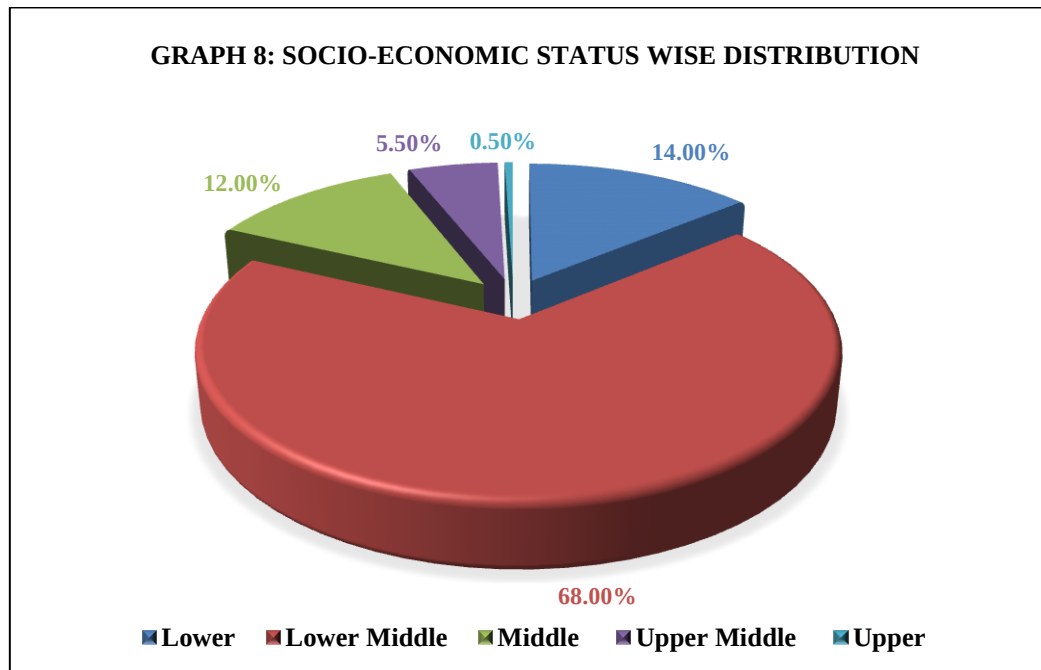


Table No. 9: Distribution of patients according to Age of Marriage (G-A n= 100, G-B n=100, Total n=200)

Age of Marriage	No. of Patients		Total	Percentage
	Group-A	Group-B		
15-20 years	21	13	34	17.00%
20-25 years	50	62	112	56.00%
25-30 years	28	22	50	25.00%
30-35 years	01	03	04	02.00%
Total	100	100	200	100%

The above Table reveals that the maximum number of patients i.e. 112 (56.00%) patients were married at age of between 20-25 years followed by 50 (25.00%) patients married at age between 25-30 years. 34 (17.00%) patients married at the age below 20 years while 4 (02.00%) patients married at the age of 30-35 years.

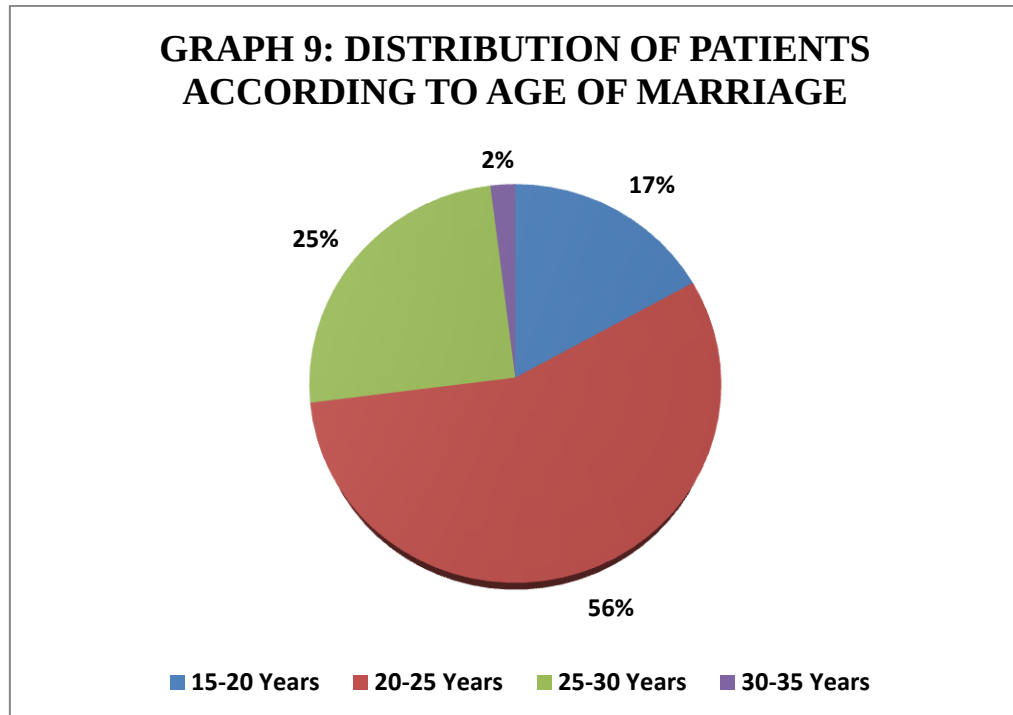
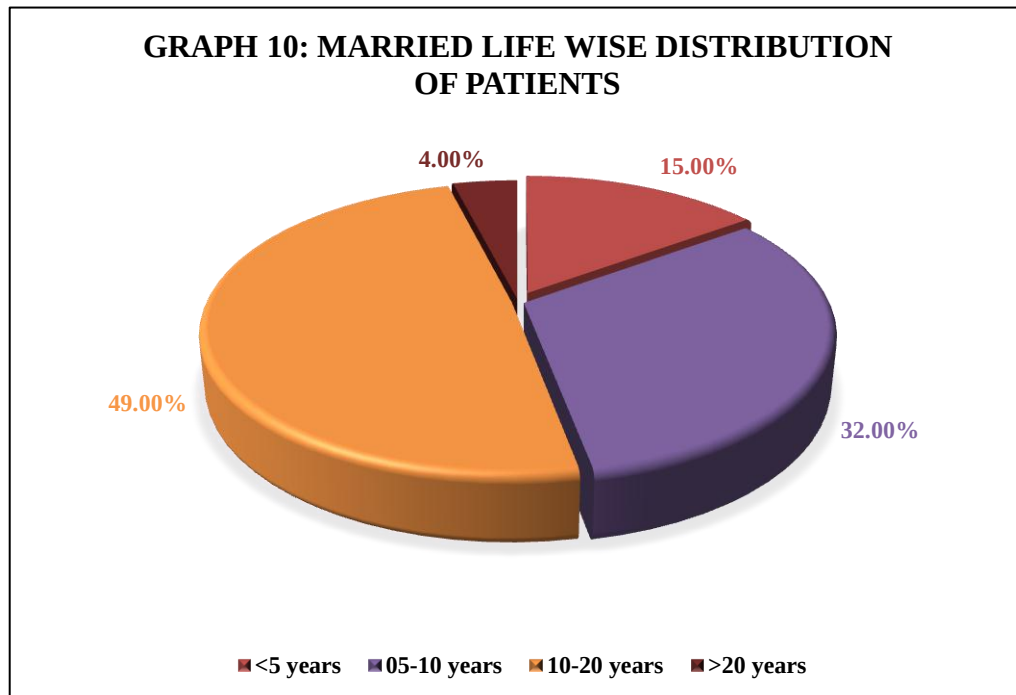


Table No. 10: Married life wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Married life (in years)	No. of Patients		Total	Percentage
	Group-A	Group-B		
<5 years	17	13	30	15.00%
05-10 years	29	35	64	32.00%
10-20 years	51	47	98	49.00%
>20 years	03	05	08	04.00%
Total	100	100	200	100%

The above Table shows that the married life of maximum 98(49.00%) patients was between 10-20 years followed by 64 (32.00%) patients whom married life was between 05-10 years 30(15.00%) patients had married life less than 5 years while 8 (04.00%) patients had more than 20 years of married life.



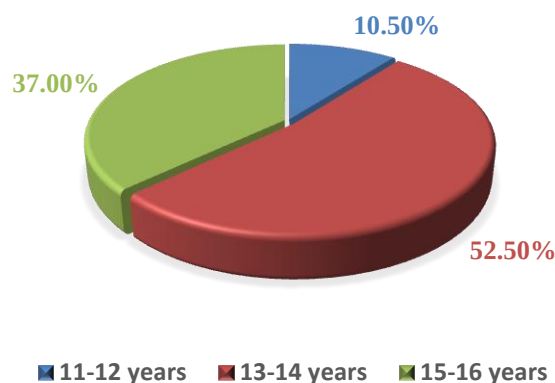
OBSERVATIONS ON HISTORY**Table No. 11: Previous menstrual history wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

Menstrual history		No. of Patients		Total	Percentage
		Group-A	Group-B		
Age of Menarche	11-12 years	09	12	21	10.50%
	13-14 years	53	52	105	52.50%
	15-16 years	38	36	74	37.00%
	Total	100	100	200	100%
Regularity	Regular	100	100	200	100%
	Irregular	00	00	00	00.00%
	Total	100	100	200	100%
Duration	1-2 days	17	15	32	16.00%
	3-4 days	55	53	108	54.00%
	5-6 days	22	26	48	24.00%
	>7 days	06	06	12	06.00%
	Total	100	100	200	100%
Inter-menstrual period	<21 days	00	00	00	00%
	21-35 days	97	98	195	97.50%
	>35 days	03	02	05	02.50%
	Total	100	100	200	100%
Amount of bleeding	Scanty	04	02	06	03.00%
	Normal	96	98	194	97.00%
	Excessive	00	00	00	00.00%
	Total	100	100	200	100%

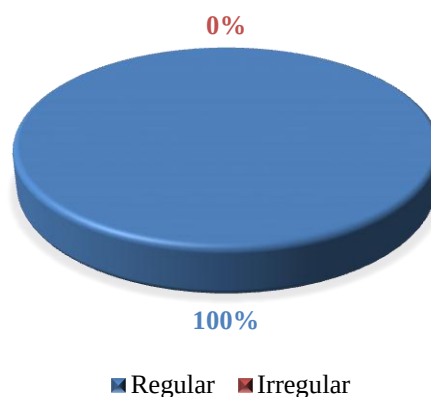
Regarding menstrual history, it is revealed from the table that -

- Maximum 105 (52.50%) patients attained menarche at the age of 13-14 years followed by 74 (37.00%) patients at age of 15- 16 years while 21 (10.50%) patients attained menarche at the age of 11-12 years.
- All 200 (100%) patients found having regular menstrual history in this study.
- Maximum 108 (54.00%) patients had duration of menstrual bleeding in the range of 3-4 days followed by 48 (24.00%) patients in the range of 3-4 days. 32 (16.00%) patients had menstrual bleeding for a duration of 1-2 days while only 12 (06.00%) patients having more than 7 days menstrual bleeding.
- Interval between two cycles was found normal i.e. 21-35 days in maximum 195 (97.50%) patients whereas 05 (2.50%) patients had a prolonged interval of menses i.e. more than 35 days.
- Maximum 194 (97.00%) patients had normal amount of bleeding, while 06 (03.00%) patients had scanty bleeding.

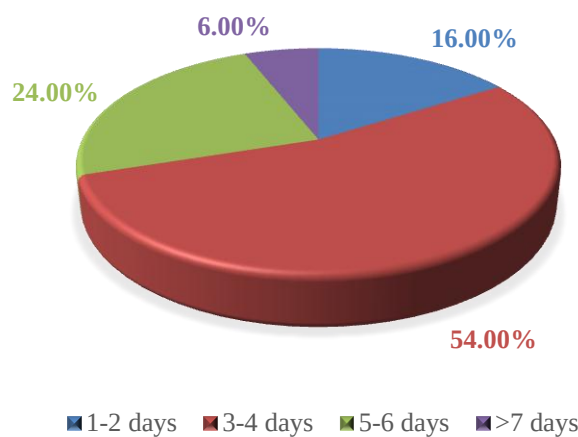
GRAPH 11 A: AGE OF MENARCHE



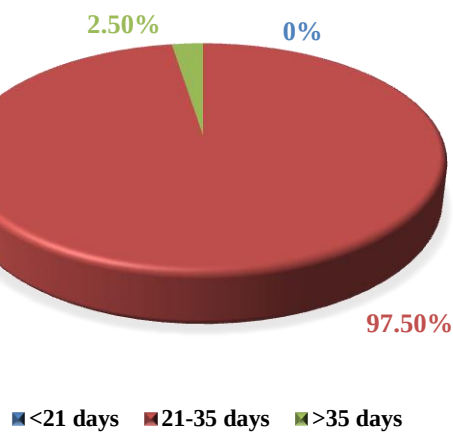
GRAPH 11 B: REGULARITY OF MENSTRUAL CYCLE



GRAPH 11 C: DURATION OF MENSTRUAL FLOW



GRAPH 11 D: INTER-MENSTRUAL PERIOD



GRAPH 11 E: AMOUNT OF BLEEDING DURING MENSTRUATION

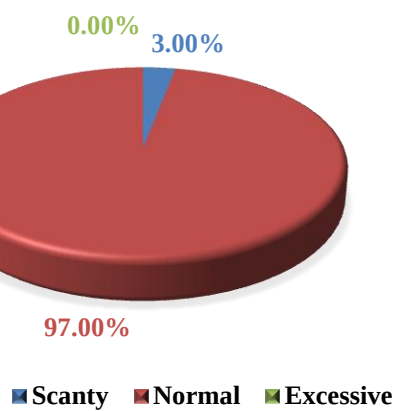


Table No. 12: Parity wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Parity	No. of Patients		Total	Percentage
	Group-A	Group-B		
Nulliparous	00	00	00	00.00%
Primi para	05	00	05	2.50%
Second Para	42	59	101	50.50%
Multipara	53	41	94	47.00%
Total	100	100	200	100%

In this study, above table shows obstetrical history about parity in which maximum 101 (50.50%) patients belong to second Para followed by 94 (47.00%) patients belongs multipara while only 05 (2.50%) patients were belong to Primiparous.

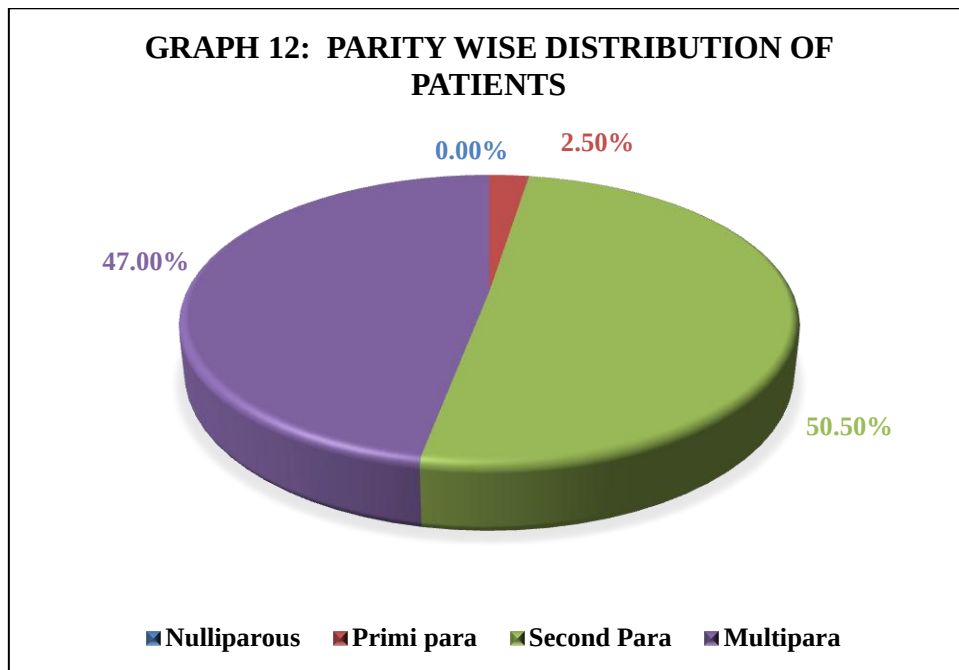


Table No. 13: Sexual history (coitus frequency per week) wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Coitus frequency per week	No. of Patients		Total	Percentage
	Group-A	Group-B		
1	38	31	69	34.50%
2	26	37	63	31.50%
3-4	24	26	50	25.00%
5-6	12	06	18	09.00%
Total	100	100	200	100%

The above Table reveals about sexual history of enrolled patients that maximum patients 69 (34.50%) had an average 1 time frequency of coitus per week followed by 63 (31.50%) patients had an average 2 times coitus per week, 50 (25.00%) patients had 3-4 times frequency of coitus per week while 18 (09.00%) patients had 5-6 times frequency of coitus per week.

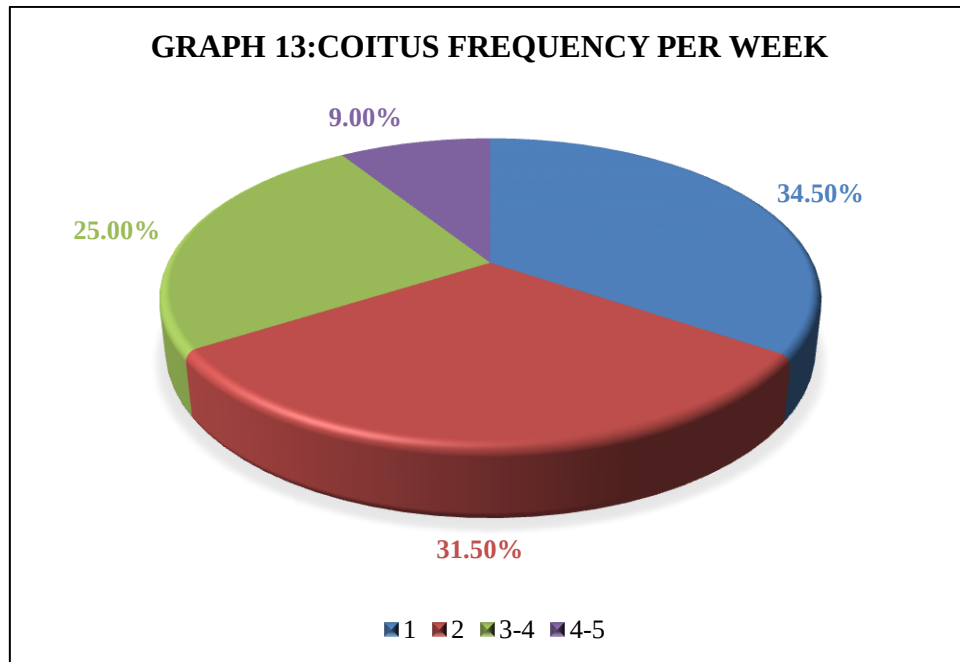


Table No. 14: Contraceptive history wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Contraceptive	No. of Patients		Total	Percentage
	Group-A	Group-B		
Barrier	18	26	44	22.00%
Injectable	00	00	00	00.00%
Tubectomy	63	45	108	54.00%
None	19	29	48	24.00%
Total	100	100	200	100%

In this study above table shows that Maximum patients adopted of tubal ligation contraception were 108 (54.00%), patients of barrier method were 44 (22.00%), and patients adopted no any method were 48 (24.00%) patients. Patients adopted OCP & IUCD method was excluded in this study.

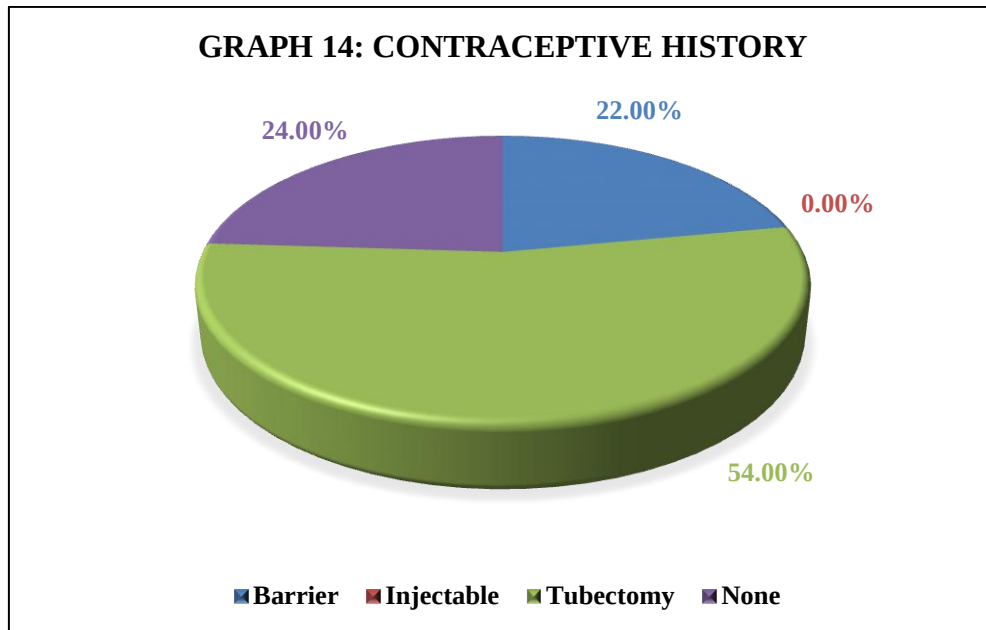


Table No. 15: Duration of illness wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Duration of illness in years	No. of Patients		Total	Percentage
	Group-A	Group-B		
<1	19	25	44	22.00%
1-2	41	18	59	29.50%
2-3	16	18	34	17.00%
>3	24	39	63	31.50%
Total	100	100	200	100%

Above table shows that in this study out of 200 patients, duration of illness of maximum 63 (31.50%) patients was more than 3 years followed by 59 (29.50%) patients having 1-2 years duration of illness. 44 (22.00%) patients were suffer for less than 1 year while 34 (17.00%) patients were having 2-3 years of duration of illness.

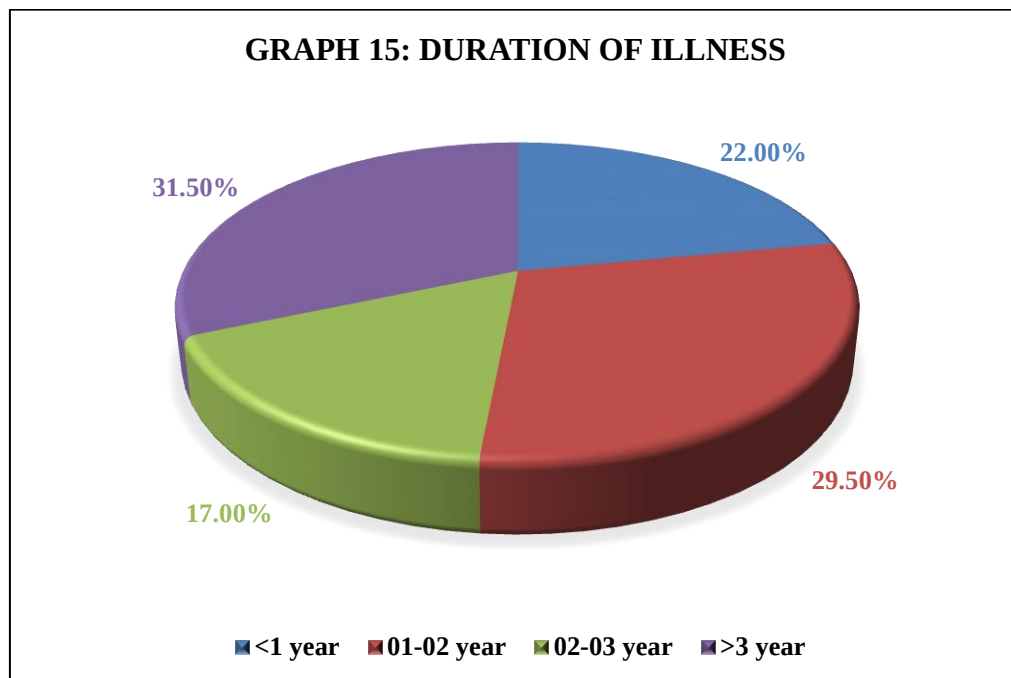


Table No. 16: Sharirika Prakriti wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)

<i>Sharirika Prakriti</i>	No. of Patients		Total	Percentage
	Group-A	Group-B		
<i>Vata-Pitta</i>	46	38	84	42.00%
<i>Pitta-Kapha</i>	28	26	54	27.00%
<i>Kapha-Vata</i>	26	36	62	31.00%
<i>Sama</i>	00	00	00	00.00%
Total	100	100	200	100%

In above table reveals that among 200 registered patients maximum 84 (42.00%) were of *Vata-Pitta prakriti*, 62(31.00%) patients were of *Kapha-Vata prakriti* and 54(27.00%) patients were of *Pitta-Kapha prakriti*.

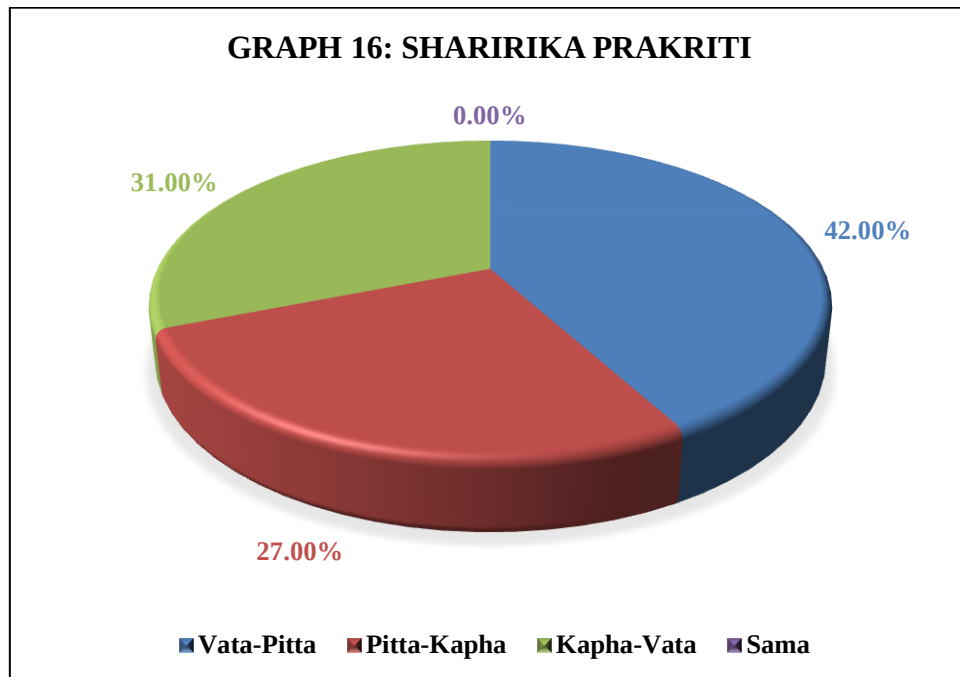


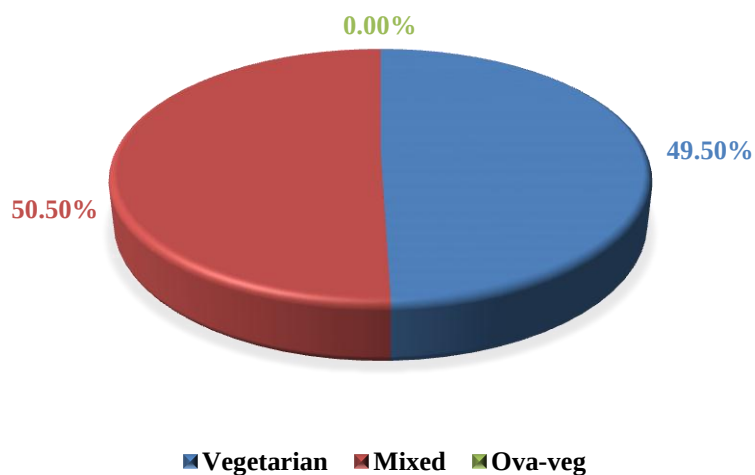
Table No. 17: Personal history wise distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Personal history		No. of Patients		Total	Percentage
		Group-A	Group-B		
Dietary pattern	Vegetarian	53	46	99	49.50%
	Mixed	47	54	101	50.50%
	Ova-veg	00	00	00	00.00%
	Total	100	100	200	100%
Addiction	Tobacco	05	09	14	07.00%
	Tea / Coffee	33	41	74	37.00%
	Alcohol	00	00	00	00.00%
	Smoking	04	02	06	03.00%
	None	58	48	106	53.00%
	Total	100	100	200	100%
Bowel Habit	Regular	84	67	151	75.50%
	Irregular	04	07	11	05.50%
	Constipated	12	26	38	19.00%
	Loose motion	00	00	00	00.00%
	Total	100	100	200	100%

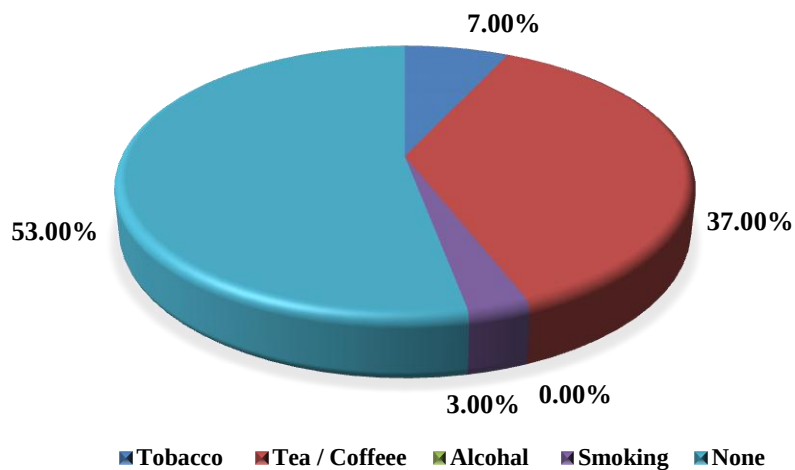
Regarding personal history, it is relevant from above table –

- In the present study, maximum number of patients 101(50.50%) had mixed diet pattern while 99(49.50%) patients had strictly vegetarian diet pattern.
- Maximum patients 106 (53.00%) were having no any type of addiction. 74(37.00%) patients were addicted for Tea or Coffee. 14 (07.00%) patients were addicted for Tobacco while 06(03.00%) patients were addicted for smoking.
- From above table, it is depicted that maximum no. of patients i.e. 151 (75.50%) were having regular bowel habit and 38(19.00%) patients were having constipated bowel habit while 11(05.50%) patients were having irregular bowel habit.

GRAPH 17 A: DIETARY PATTERN



GRAPH 17 B: ADDICTION



GRAPH 17 C: BOWEL HABIT

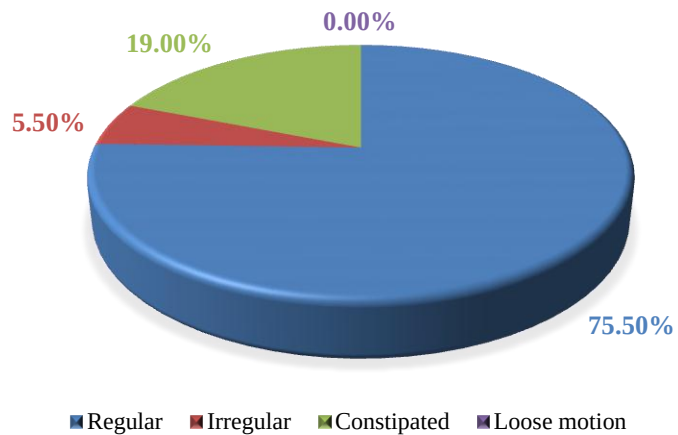


**Table No. 18: Per Speculum Examination findings based distribution of patients
(G-A n= 100, G-B n=100, Total n=200)**

Per Speculum Examination			No. of Patients		Total	Percent age
			Group-A	Group-B		
Discharge	Amount of discharge	Normal	36	31	67	33.50%
		Scanty	00	00	00	00.00%
		Profuse	64	69	133	66.50%
		Total	100	100	200	100%
	Colour of discharge	White	79	92	171	85.50%
		Curdy white	21	08	29	14.50%
		Yellow	00	00	00	00.00%
		Yellowish Green	00	00	00	00.00%
		Total	100	100	200	100%
	Consistency of discharge	Normal	21	15	36	18.00%
		Thick	61	64	125	62.50%
		Watery	18	21	39	19.50%
		Purulent	00	00	00	00.00%
		Blood stained	00	00	00	00.00%
		Total	100	100	200	100%
	Foul smell	Present	42	56	98	49.00%
		Absent	58	44	102	51.00%
		Total	100	100	200	100%
Cervix	Size	Normal	27	30	57	28.50%
		Hypertrophied	73	70	143	71.50%
		Total	100	100	200	100%
	Shape	Parous	87	93	180	90.00%
		Normal	13	07	20	10.00%

		Pinhole	00	00	00	00.00%
		Total	100	100	200	100%
	Site of Erosion on Cervix	Upper lip	10	17	27	13.50%
		Lower lip	06	05	11	05.50%
		Whole cervix	75	63	138	69.00%
		Around os	09	15	24	12.00%
		Total	100	100	200	100%
	Nabothian Cyst	Present	33	47	80	40.00%
		Absent	67	53	120	60.00%
		Total	100	100	200	100%

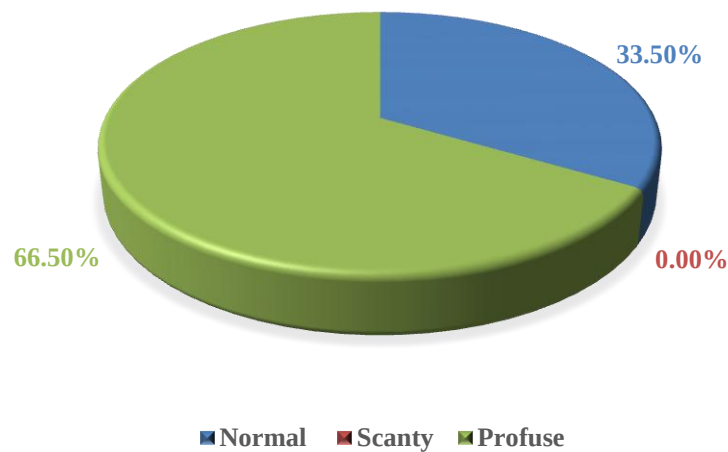
Above table reveals per speculum examination findings before treatment which depicts that-

- In maximum number of patients i.e. 133(66.50%) amount of vaginal discharge was profuse while in 67(33.50%) patients it was normal.
- Colour of vaginal discharge in maximum number of patients i.e. 171(85.50%) was white while in 29(14.50%) patients Colour of vaginal discharge was curdy white.
- Consistency of vaginal discharge in maximum number of patients i.e. 125(62.50%) patients was thick, in 39(19.50%) patients watery and in 36 (18.00%) patients consistency was normal.
- In 102(51.00%) Patients, Foul smell was absent in Vaginal discharge while in rest 98 (49.00%) Patients there was foul smell present in vaginal discharge.
- In maximum 143(71.50%) patients, size of cervix was found Hypertrophied while rest of patients i.e. 57(28.50%) patients size of cervix was normal.
- Per speculum examination shows that shape of cervix of most of the patients i.e. 180 (90.00%) patients was parous and rest 20(10.00%) patients was normal.
- In maximum 138(69.00%) patients, site of erosion on cervix was on whole cervix, in 27(13.50%) patients erosion was on upper lip, in 24(12.00%)

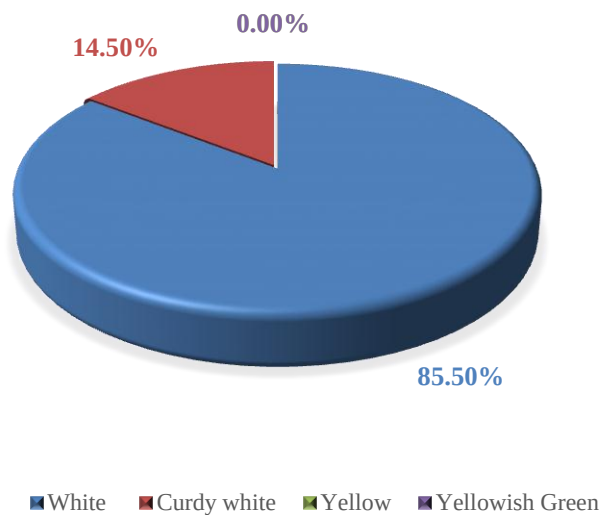
patients it was on around the os while in 11 (05.50%) patients erosion was on lower lip.

- Nabothian cyst was not observed on per speculum examination in 120 (60.00%) patients while in 80 (40.00%) patients' nabothian cyst was present.

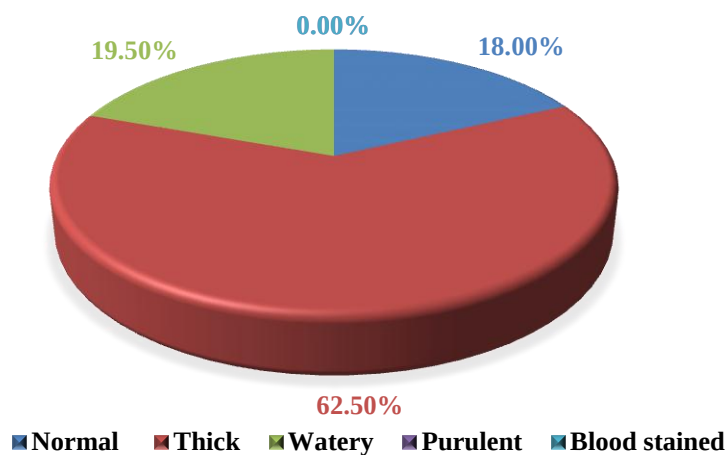
GRAPH 18 A: AMOUNT OF VAGINAL DISCHARGE



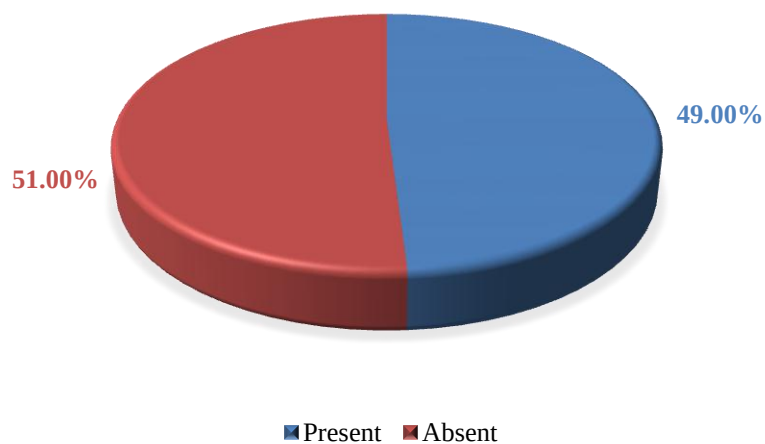
GRAPH 18 B: COLOUR OF VAGINAL DISCHARGE



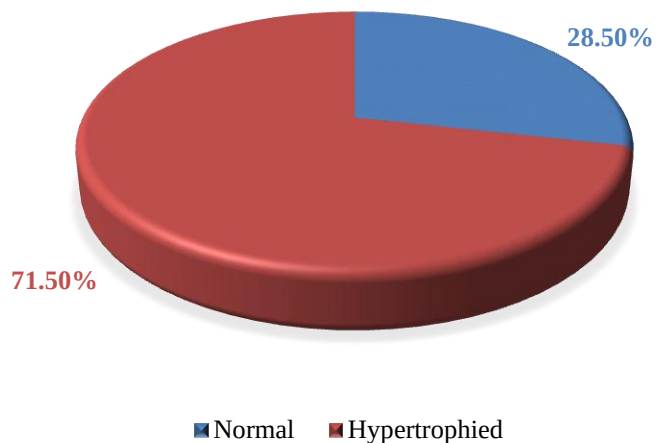
GRAPH 18 C: CONSISTENCY OF VAGINAL DISCHARGE



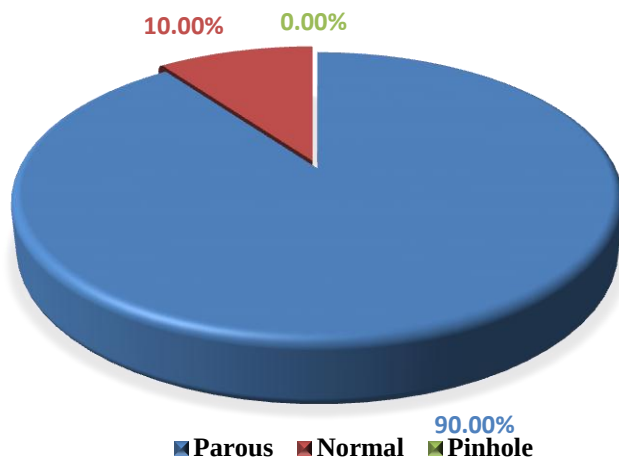
GRAPH 18 D: FOUL SMELL IN VAGINAL DISCHARGE



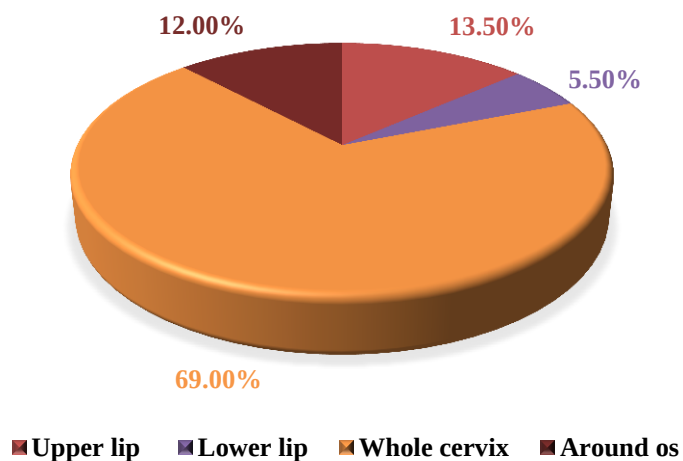
GRAPH 18 E: SIZE OF CERVIX



GRAPH 18 F: SHAPE OF CERVIX



GRAPH 18 G: SITE OF EROSION ON CERVIX



GRAPH 18 H : NABOTHIAN CYST

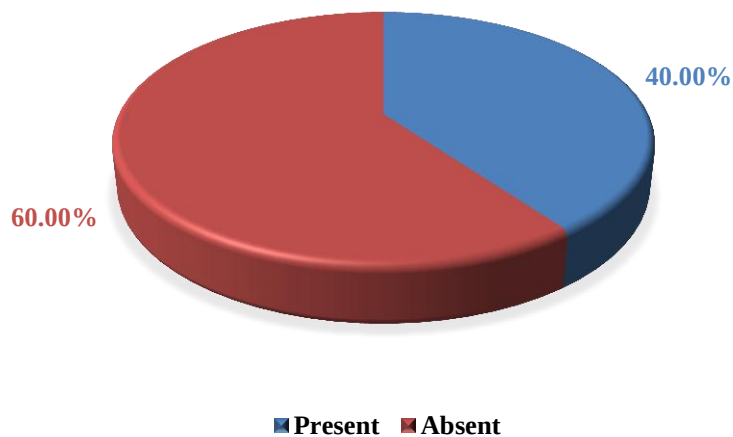


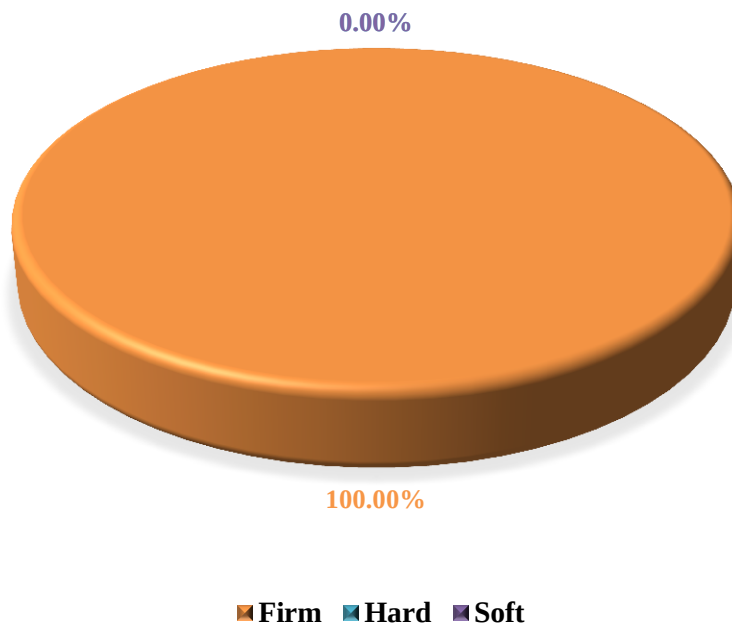
**Table No. 19: Per Vaginal Examination findings based distribution of patients
(G-A n= 100, G-B n=100, Total n=200)**

Per Vaginal Examination		No. of Patients		Total	%
		Group-A	Group-B		
Cervical consistency	Firm	100	100	200	100.00%
	Hard	00	00	00	00.00%
	Soft	00	00	00	00.00%
	Total	100	100	200	100%
Cervical motion tenderness	Present	38	39	77	38.50%
	Absent	62	61	123	61.50%
	Total	100	100	200	100%

Above table reveals per vaginal examination findings before treatment which depicts that-

- Consistency of the cervix in all the 200 (100%) patients was firm.
- In maximum number of patients i.e. 123(61.50%) patients' cervical motion tenderness was absent and in rest of the patients cervical tenderness was present.

GRAPH 19 A: CERVICAL CONSISTENCY



GRAPH 19 B: CERVICAL MOTION TENDERNESS

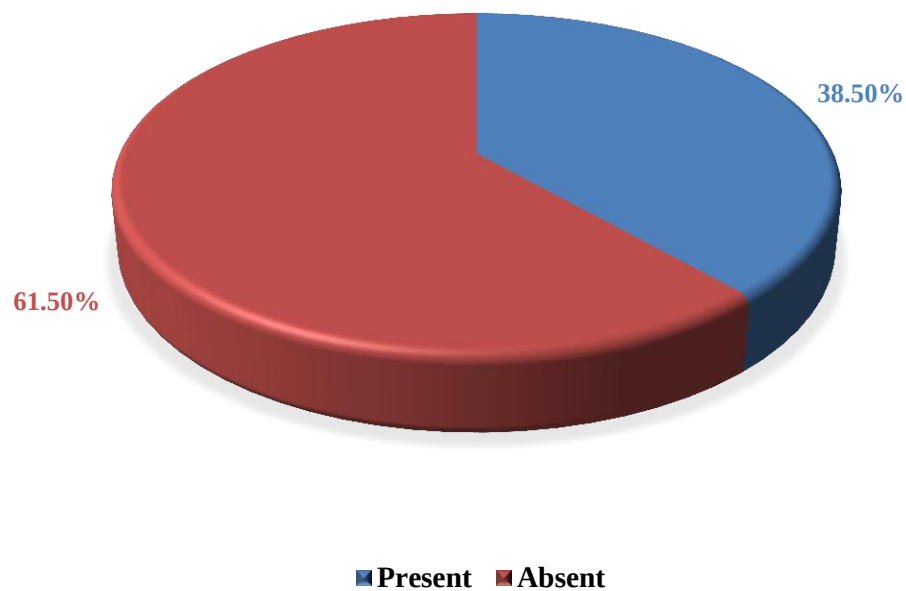
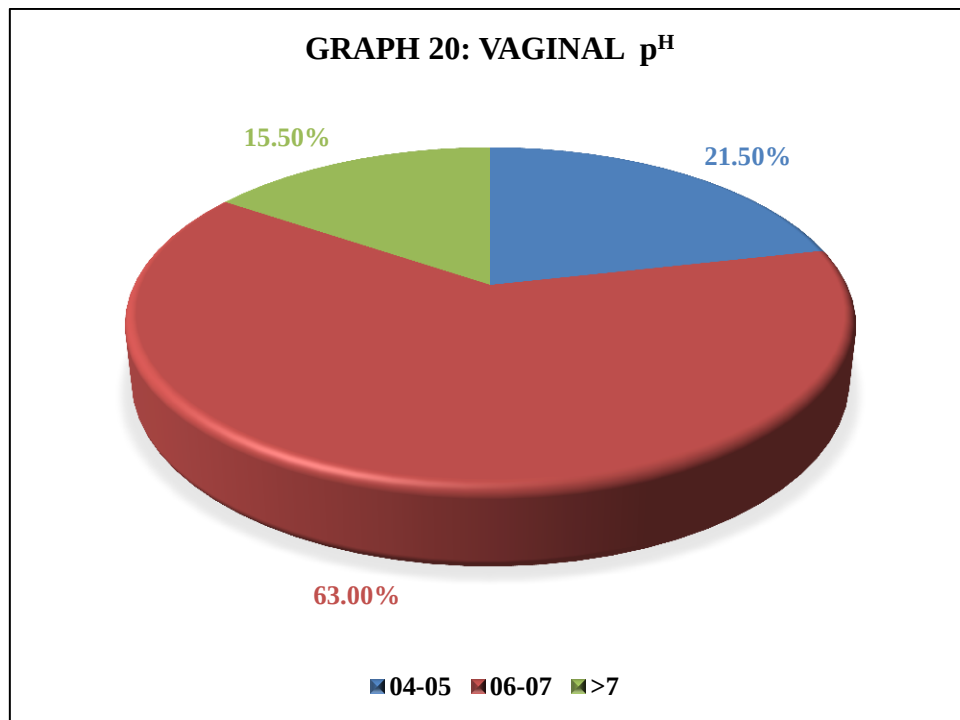


Table No. 20: Vaginal pH based distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Vaginal pH	No. of Patients		Total	%
	Group-A	Group-B		
4-5	19	24	43	21.50%
6-7	61	65	126	63.00%
>7	20	11	31	15.50%
Total	100	100	200	100%

Above Table shows that in total registered patients, pH of maximum 126 (63.00%) patients was 6-7, in 43 (21.50%) patients was 4-5 while in 31 (15.50%) patients pH was more than 7.



OBSERVATION ON SUBJECTIVE PARAMETERS BEFORE TREATMENT:**Table No. 21: Amount of Vaginal discharge based distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

Amount of Vaginal discharge	No. of Patients		Total	%
	Group-A	Group-B		
Normal (0)	00	00	00	00.00%
Mild (1)	04	01	05	02.50%
Moderate (2)	47	42	89	44.50%
Severe (3)	49	57	106	53.00%
Total	100	100	200	100%

Above table is based on subjective parameter of amount of vaginal discharge which depicts that all registered patients having complaints of vaginal discharge in which maximum 106 (53.00%) patients having severe vaginal discharge followed by 89 (44.50%) patients having moderate discharge while 5(02.50%) patients having only mild vaginal discharge.

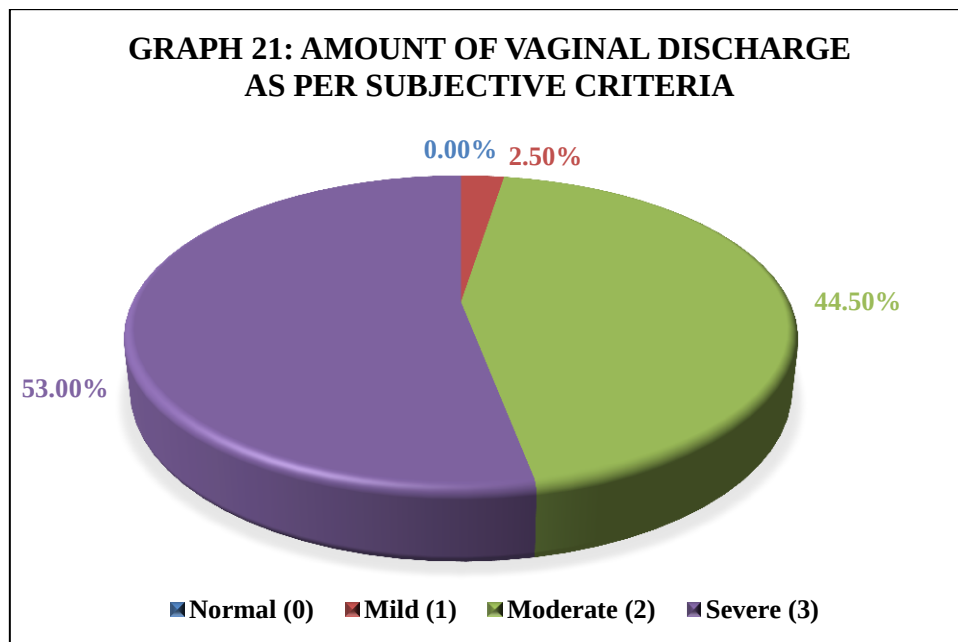


Table No. 22: Low backache based distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Low backache	No. of Patients		Total	%
	Group-A	Group-B		
Absent(0)	15	07	22	11.00%
Mild (1)	07	07	14	07.00%
Moderate (2)	43	56	99	49.50%
Severe (3)	35	30	65	32.50%
Total	100	100	200	100%

In this study above table shows that maximum 99(49.50%) patients had complaint of low backache of moderate type, 65(32.50%) patients had severe low backache and 14(07.00%) patients had mild low backache.

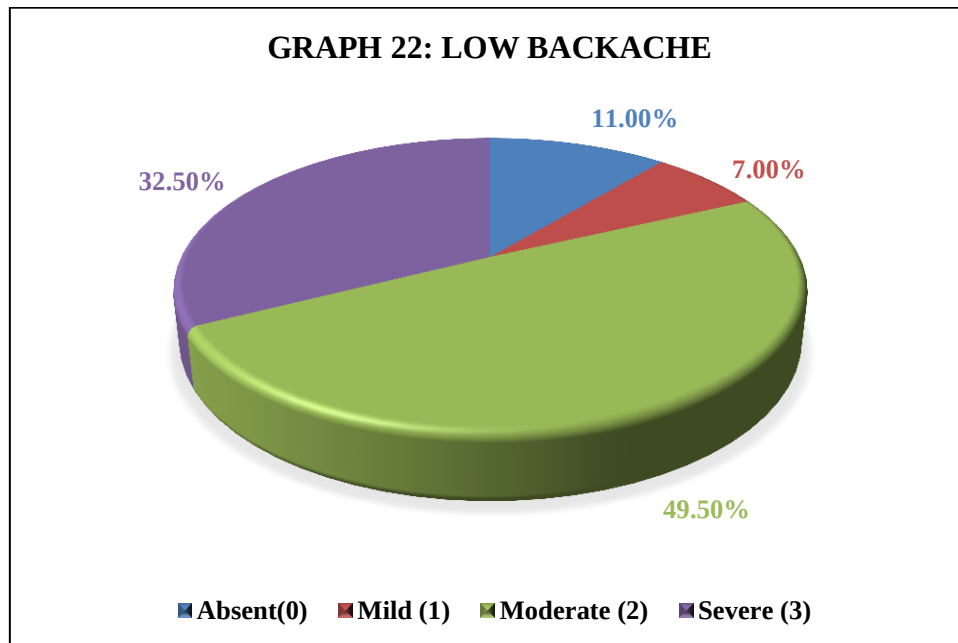


Table No. 23: Dyspareunia based distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Dyspareunia	No. of Patients		Total	%
	Group-A	Group-B		
Absent(0)	20	14	34	17.00%
Mild (1)	07	08	15	07.50%
Moderate (2)	52	58	110	55.00%
Severe (3)	21	20	41	20.50%
Total	100	100	200	100%

Above table in this study reveals complaints of Dyspareunia in which maximum 110(55.00%) patients had complaint of moderate type Dyspareunia, 41(20.50%) patients had severe Dyspareunia and 15(07.50%) patients had mild Dyspareunia while 34(17.00%) patients had no any complaint of Dyspareunia.

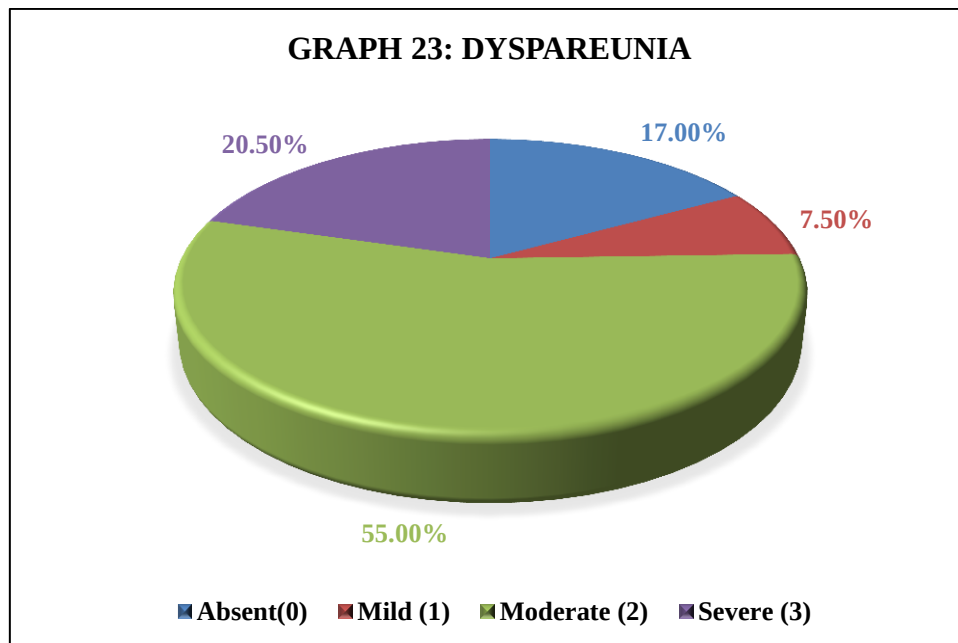


Table No. 24: Pruritus vulvae based distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Pruritus vulvae	No. of Patients		Total	%
	Group-A	Group-B		
Absent(0)	38	27	65	32.50%
Mild (1)	27	43	70	35.00%
Moderate (2)	35	29	64	32.00%
Severe (3)	00	01	01	00.50%
Total	100	100	200	100%

Above table shows subjective complaints of Pruritus vulvae which depict those maximum 70 (35.00%) patients had mild Pruritus vulvae, 64(32.00%) patients had moderate Pruritus vulvae and only 1(0.50%) patients had severe Pruritus vulvae while 65(32.50%) patients had no complaint of Pruritus vulvae.

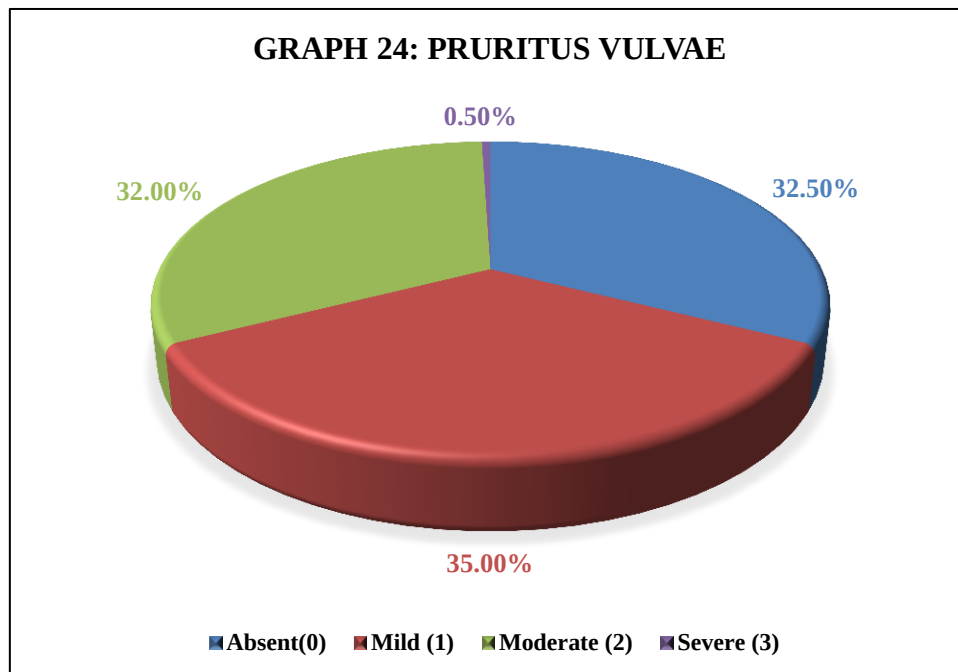
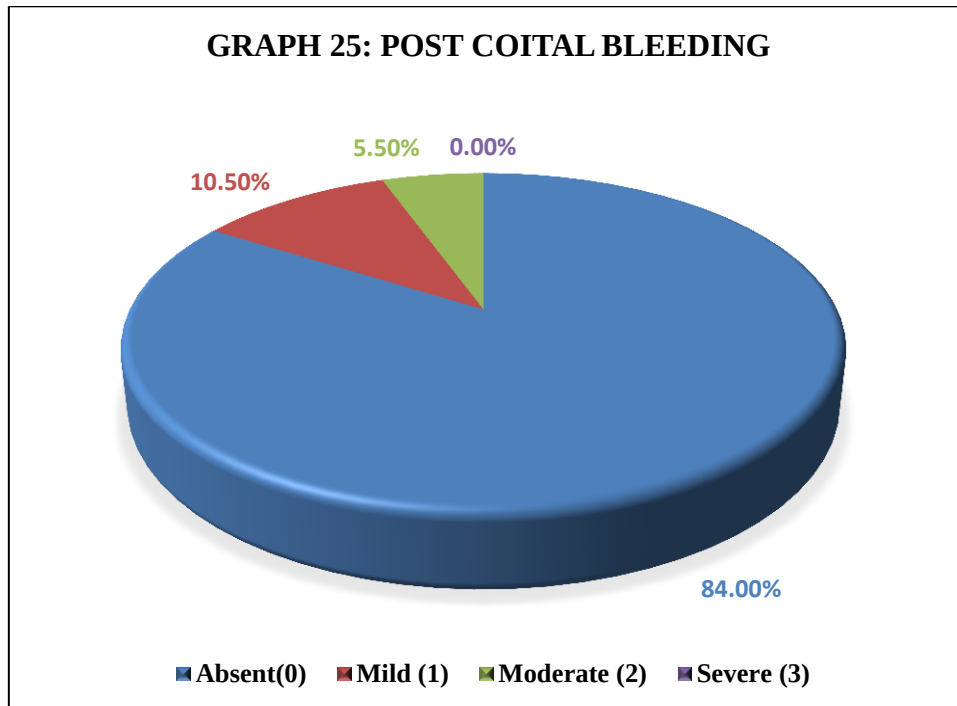


Table No. 25: Post coital bleeding based distribution of patients (G-A n= 100, G-B n=100, Total n=200)

Post coital bleeding	No. of Patients		Total	%
	Group-A	Group-B		
Absent(0)	88	80	168	84.00%
Mild (1)	09	12	21	10.50%
Moderate (2)	03	08	11	05.50%
Severe (3)	00	00	00	00.00%
Total	100	100	200	100%

In this study above table shows severity of Post coital bleeding in which 21(10.50%) patients had mild type Post coital bleeding and 11(05.50%) patients had moderate Post coital bleeding while most of the patients i.e. 168(84.00%) patients had no complaints of Post coital bleeding.



OBSERVATION ON OBJECTIVES PARAMETERS BEFORE TREATMENT:**Table No. 26: Extent of Erosion based distribution of patients (G-A n= 100, G-B n=100, Total n=200)**

Extent of Erosion	No. of Patients		Total	%
	Group-A	Group-B		
00%- 25%(0)	00	00	00	00.00%
26%- 50% (1)	06	03	09	04.50%
51%- 75% (2)	33	22	55	27.50%
76%- 100% (3)	61	75	136	68.00%
Total	100	100	200	100%

Above table shows extents of erosion of objective parameter and according to this table majority of the total registered patients i.e. 136(68.00%) patients had erosion on cervix in the range of 76%- 100%, 55(27.50%) patients had 51%- 75% erosion on cervix while in 9(04.50%) patients erosion on cervix was 26%- 50%.

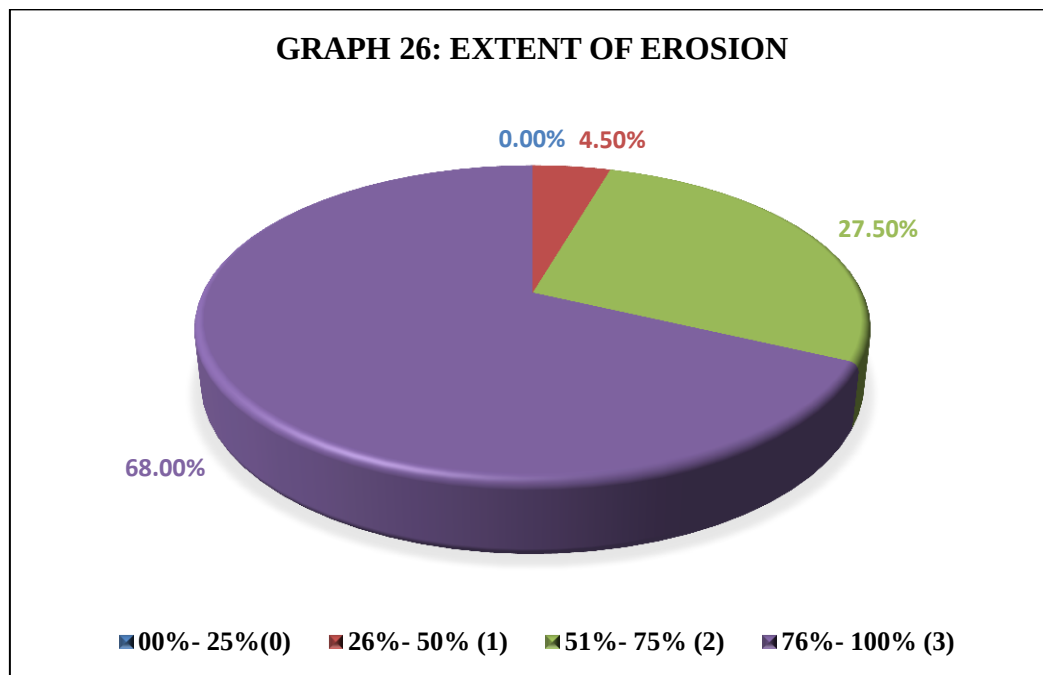
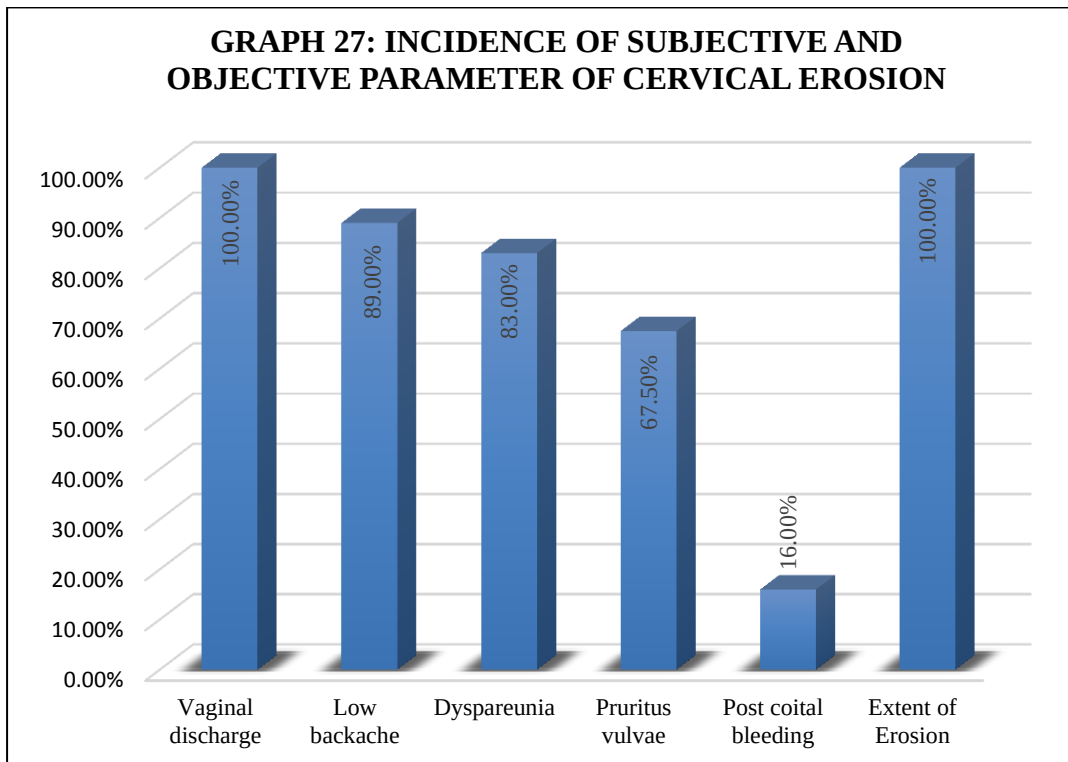


Table No. 27: Incidence of subjective and objective parameter of cervical erosion

S.No.	Sign and Symptoms	No. of Patients		Total	Percentage
		Group-A	Group-B		
1.	Vaginal discharge	100	100	200	100.00%
2.	Low backache	85	93	178	89.00%
3.	Dyspareunia	80	86	166	83.00%
4.	Pruritus vulvae	62	73	135	67.50%
5.	Post coital bleeding	12	20	32	16.00%
6.	Extent of Erosion	100	100	200	100.00%

From above table, it is clear that erosion on cervix and vaginal discharge were present in all 200 (100%) patients, Low backache in 178(89.00%) patients. Dyspareunia was present in 166(83.00%) patients, Pruritus vulvae in 135(67.50%) patients, and Post coital bleeding was present in 32(16.00%) patients.



RESULTS

SUBJECTIVE PARAMETERS:

Table No. 1: Amount of Vaginal discharge before and after treatment in both the groups (G-A n= 100, G-B n=100, Total n=200)

Amount of Vaginal discharge	Group A				Group B			
	BT		AT		BT		AT	
	No.	%	No.	%	No.	%	No.	%
Normal (0)	00	00.00%	55	55.00%	00	00.00%	61	61.00%
Mild (1)	04	04.00%	45	45.00%	01	01.00%	39	39.00%
Moderate (2)	47	47.00%	00	00.00%	42	42.00%	00	00.00%
Severe (3)	49	49.00%	00	00.00%	57	57.00%	00	00.00%
Total	100	100%	100	100%	100	100%	100	100%

In Group-A, before treatment, 49 (49.00%) patients were found to have severe white discharges per vaginum, and 47 (47.00%) were with moderate amount of discharges. Only 04 (04.00%) patients were with mild degree of discharges. After treatment, in Group-A, total 55 (55.00%) patients got complete relief and mild degree of discharges found in 45 (45.00%) patients. Whereas in Group-B, before treatment, 57(57.00%) patients were found to have severe white discharges per vaginum, and 42 (42.00%) were with moderate amount of discharges. Only 01 (01.00%) patients were with mild degree of discharges. After treatment, in Group-B, total 61 (61.00%) patients got complete relief and mild degree of discharges found in 39 (39.00%) patients.

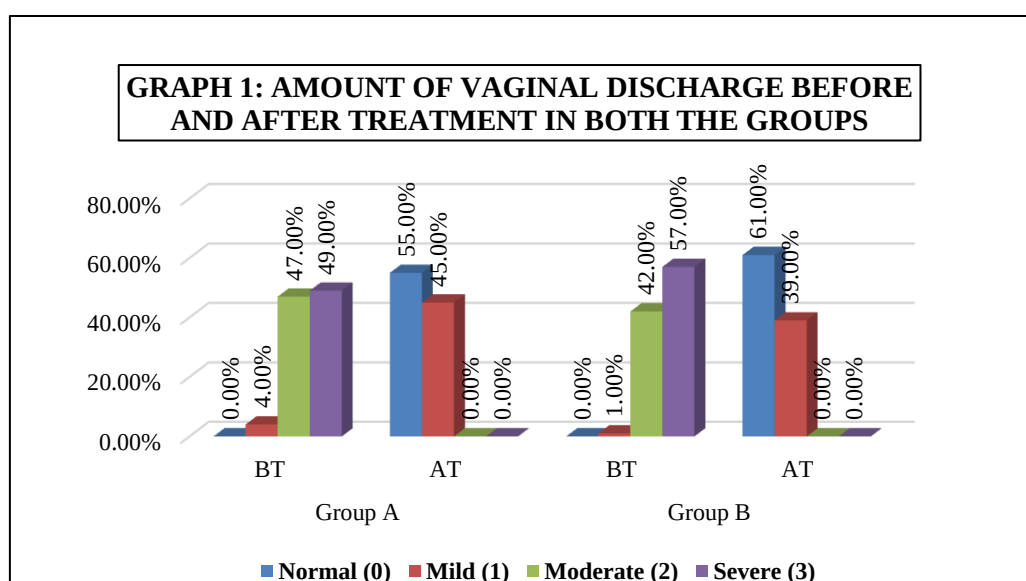


Table No. 2: Low backache before and after treatment in both the groups (G-A n= 100, G-B n=100, Total n=200)

Low backache	Group A				Group B			
	BT		AT		BT		AT	
	No.	%	No.	%	No.	%	No.	%
Absent (0)	15	15.00%	37	37.00%	07	07.00%	26	26.00%
Mild (1)	07	07.00%	59	59.00%	07	07.00%	72	72.00%
Moderate (2)	43	43.00%	04	04.00%	56	56.00%	02	02.00%
Severe (3)	35	35.00%	00	00.00%	30	30.00%	00	00.00%
Total	100	100%	100	100%	100	100%	100	100%

In Group-A, before treatment, 35 (35.00%) patients were found to have severe low- backache and 43 (43.00%) were with moderate low-backache. Only 07 (07.00%) patients were with mild degree of low-backache while 15(15.00%) patients have no any low backache. After treatment, in Group-A, total 37 (37.00%) patients got complete relief and mild degree of low-backache found in 59 (59.00%) patients, while only 04 (04.00%)patients have moderate degree of low-backache. Whereas in Group-B, before treatment, 30 (30.00%) patients were found to have severe low-backache, 56 (56.00%) were with moderate low-backache and 07 (07.00%) patients were with mild degree of low-backache, while 07 (07.00%) have no history of low-backache. After treatment, in Group-B, total 26 (26.00%) patients got complete relief and mild degree of low-backache found in 72 (72.00%) patients, and only 02 (02.00%) patients have moderate degree of low-backache.

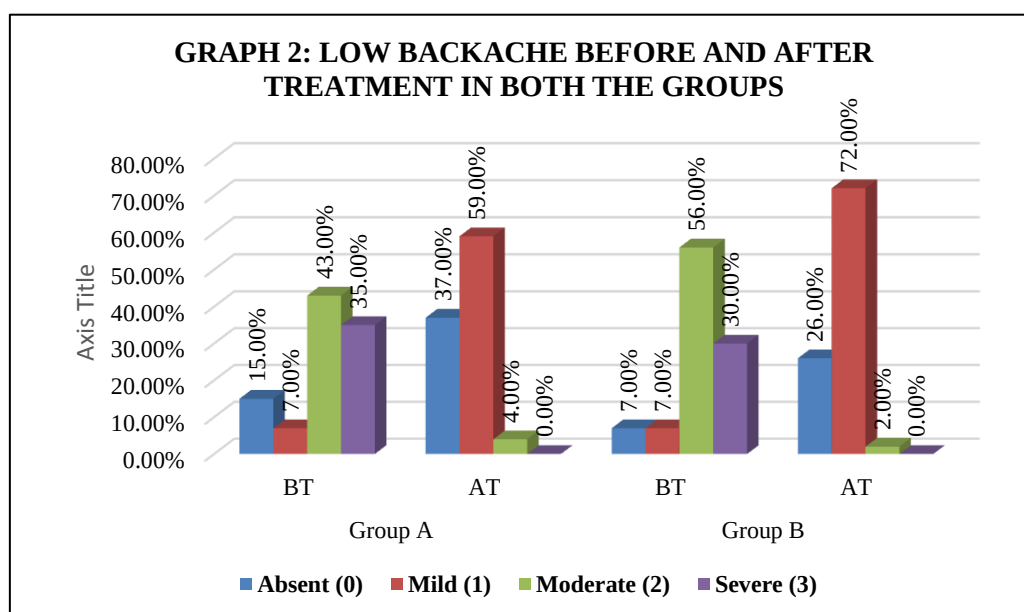


Table No. 3: Dyspareunia before and after treatment in both the groups (G-A n= 100, G-B n=100, Total n=200)

Dyspareunia	Group A				Group B			
	BT		AT		BT		AT	
	No.	%	No.	%	No.	%	No.	%
Absent (0)	20	20.00%	65	65.00%	14	14.00%	71	71.00%
Mild (1)	07	07.00%	35	35.00%	08	08.00%	29	29.00%
Moderate (2)	52	52.00%	00	00.00%	58	58.00%	00	00.00%
Severe (3)	21	21.00%	00	00.00%	20	20.00%	00	00.00%
Total	100	100%	100	100%	100	100%	100	100%

In Group-A, before treatment, 21 (21.00%) patients were found to have severe Dyspareunia, and 52 (52.00%) were with moderate Dyspareunia. Only 07 (07.00%) patients were with mild degree of Dyspareunia and 20 (20.00%) patients did not have Dyspareunia. After treatment, in Group-A, total 65 (65.00%) patients got complete relief and mild degree of Dyspareunia was found in 35 (35.00%) patients. Whereas in Group-B, before treatment, 20 (20.00%) patients were found to have severe Dyspareunia, and 58 (58.00%) were with moderate Dyspareunia. Only 08 (08.00%) patients were with mild degree of Dyspareunia while 14 (14.00%) patients have no Dyspareunia. After treatment, in Group-B, total 71 (71.00%) patients got complete relief and mild degree of Dyspareunia was found in 29 (29.00%) patients.

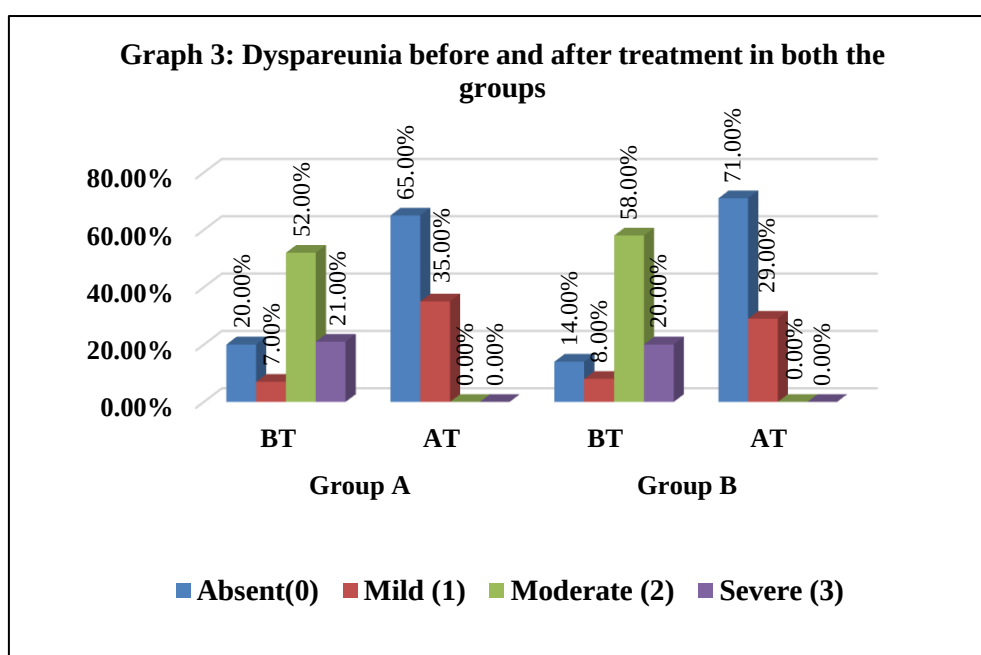


Table No. 4: Pruritus vulvae before and after treatment in both the groups (G-A n= 100, G-B n=100, Total n=200)

Pruritus vulvae	Group A				Group B			
	BT		AT		BT		AT	
	No.	%	No.	%	No.	%	No.	%
Absent (0)	38	38.00%	92	92.00%	27	27.00%	90	90.00%
Mild (1)	27	27.00%	08	08.00%	43	43.00%	10	10.00%
Moderate (2)	35	35.00%	00	00.00%	29	29.00%	00	00.00%
Severe (3)	00	00.00%	00	00.00%	01	01.00%	00	00.00%
Total	100	100%	100	100%	100	100%	100	100%

In Group-A, before treatment, none of the patient was found to have severe Pruritus vulvae, and 35 (35.00%) patients were with moderate Pruritus vulvae. Only 27 (27.00%) patients were with mild degree of Pruritus vulvae, while 38(38.00%) patients have no Pruritus vulvae. After treatment, in Group-A, total 92 (92.00%) patients got complete relief and mild degree of Pruritus vulvae was found in 08 (08.00%) patients. Whereas in Group-B, before treatment, only 01 (01.00%) patient was found to have severe Pruritus vulvae, and 29 (29.00%) were with moderate Pruritus vulvae. 43 (43.00%) patients were with mild degree of Pruritus vulvae while 27(27.00%) patients have no Pruritus vulvae. After treatment, in Group-B, total 90 (90.00%) patients got complete relief and mild degree of Pruritus vulvae was found in 10 (10.00%) patients only.

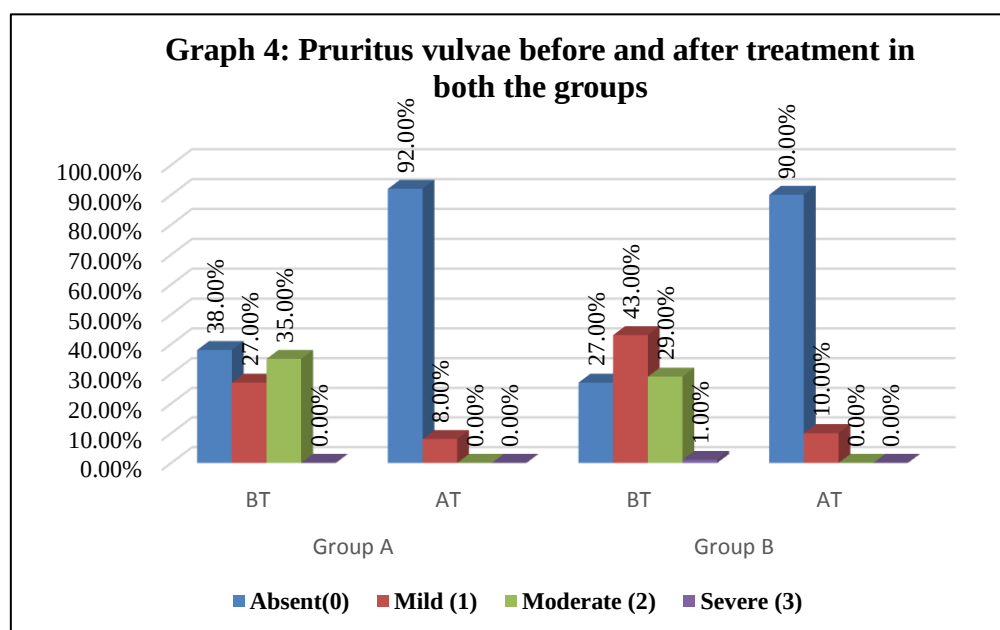
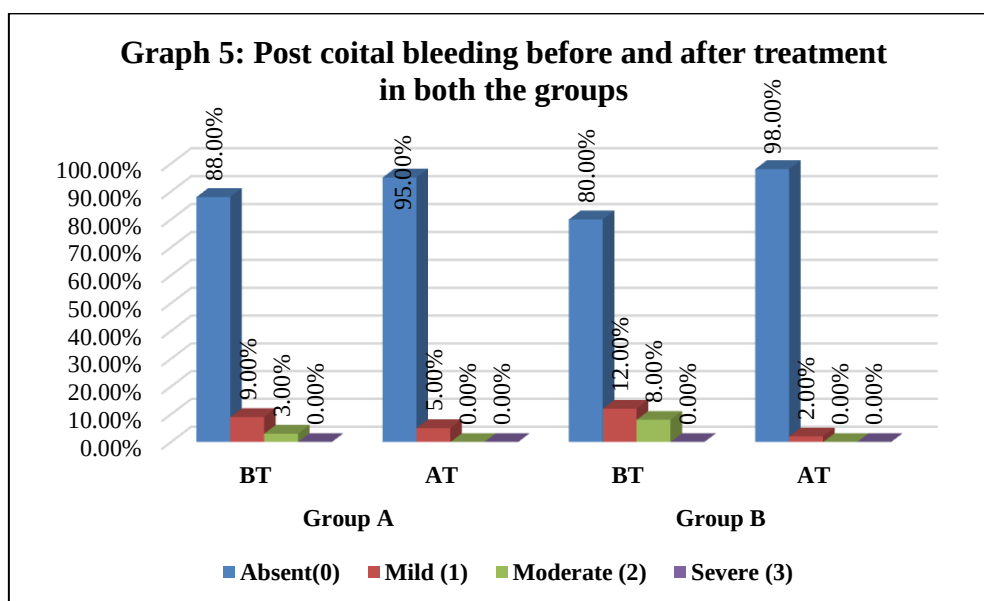


Table No. 5: Post coital bleeding before and after treatment in both the groups
(G-A n= 100, G-B n=100, Total n=200)

Post coital bleeding	Group A				Group B			
	BT		AT		BT		AT	
	No.	%	No.	%	No.	%	No.	%
Absent (0)	88	88.00%	95	95.00%	80	80.00%	98	98.00%
Mild (1)	09	09.00%	05	05.00%	12	12.00%	02	02.00%
Moderate (2)	03	03.00%	00	00.00%	08	08.00%	00	00.00%
Severe (3)	00	00.00%	00	00.00%	00	00.00%	00	00.00%
Total	100	100%	100	100%	100	100%	100	100%

In Group-A, before treatment, none of the patients were found to have severe post coital bleeding, and only 03 (03.00%) patients were with moderate post coital bleeding. 09 (09.00%) patients were with mild degree of post coital bleeding while 88(88.00%) patients have no post coital bleeding. After treatment, in Group-A, almost all the patients i.e. total 95 (95.00%) patients got complete relief. Whereas in Group-B, before treatment, none of the patients were found to have severe post coital bleeding, and 08 (08.00%) were with moderate post coital bleeding. 12 (12.00%) patients were found to have mild degree of post coital bleeding while 80(80.00%) patients have no any post coital bleeding. After treatment, in Group-B, total 98(98.00%) patients got complete relief.

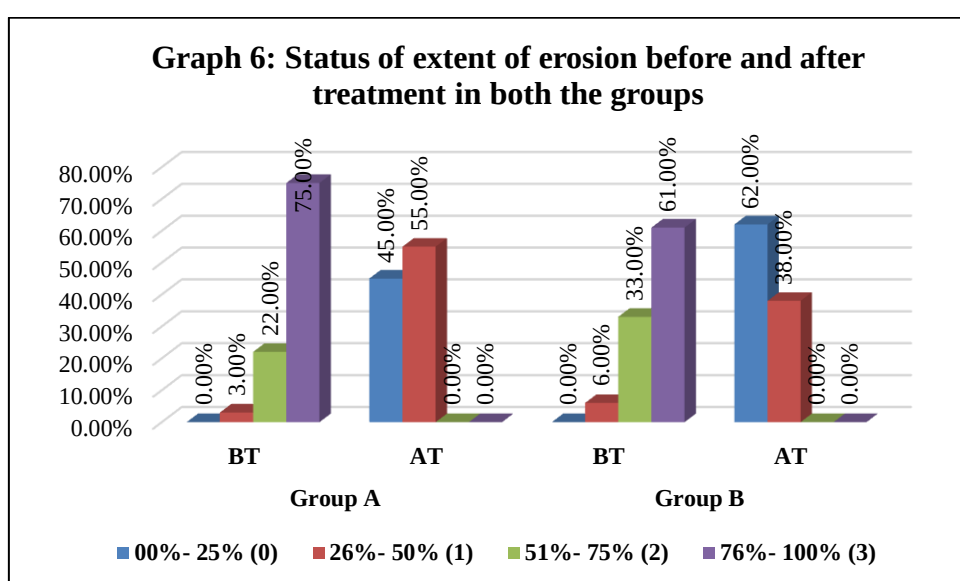


OBJECTIVE PARAMETER

Table No. 6: Showing Status of extent of erosion before and after treatment in both the groups (G-A n= 100, G-B n=100, Total n=200)

Extent of Erosion	Group A				Group B			
	BT		AT		BT		AT	
	No.	%	No.	%	No.	%	No.	%
00%- 25% (0)	00	00.00%	45	45.00%	00	00.00%	62	62.00%
26%- 50% (1)	03	03.00%	55	55.00%	06	06.00%	38	38.00%
51%- 75% (2)	22	22.00%	00	00.00%	33	33.00%	00	00.00%
76%- 100% (3)	75	75.00%	00	00.00%	61	61.00%	00	00.00%
Total	100	100%	100	100%	100	100%	100	100%

In Group-A, before treatment, 75 (75.00%) patients were found to have extent of erosion on cervix between 76%- 100%, and 22 (22.00%) were with 51%- 75% extent. Only 03 (03.00%) patients were with 26%- 50% extent of erosion. After treatment, in Group-A, total 45 (45.00%) patients got complete relief in cervical erosion while in 55 (55.00%) patients, 26%- 50% extent of erosion on cervix was found. Whereas in Group-B, before treatment, 61 (61.00%) patients were found to have 76%- 100% of extent, and 33 (33.00%) were found with 51%- 75% erosion extent. Only 06 (06.00%) patients were found with 26%- 50% of erosion extent. After treatment, in Group-B, total 62 (62.00%) patients got complete relief in cervical erosion while in 38 (38.00%) patients 26%- 50% extent of erosion on cervix was found.



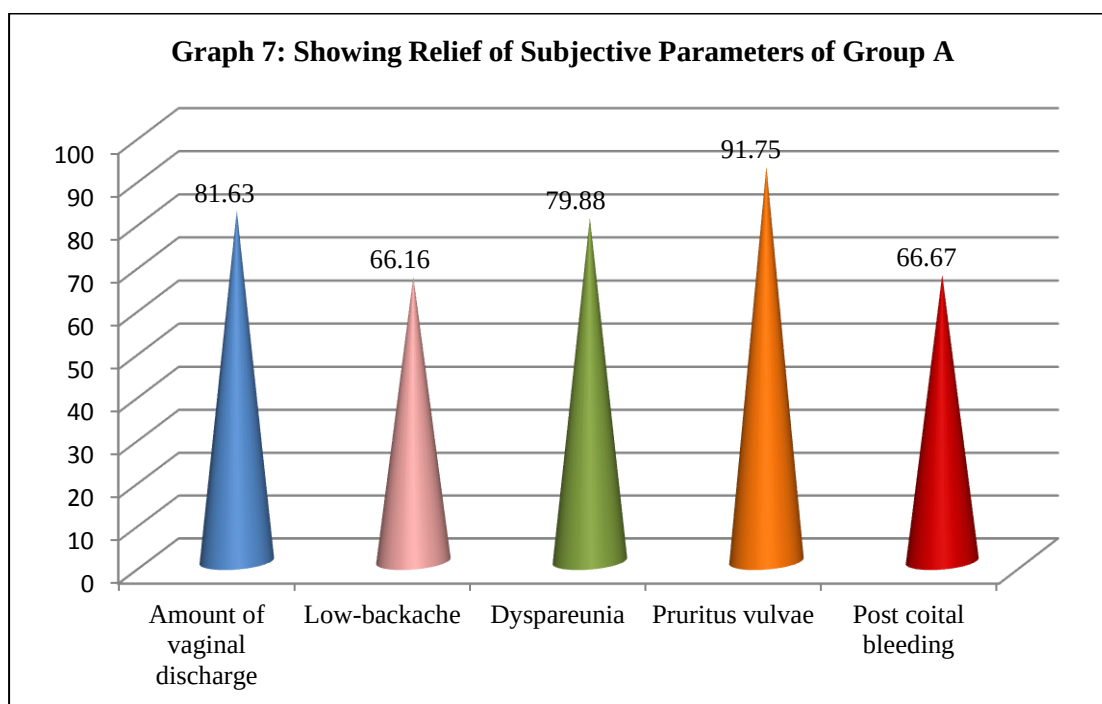
Clinical Improvement

The pattern of clinical improvement in various parameters was recorded and applied appropriate statistical methods in both groups, to find out the statistical significance of trial drugs.

Table No. 7: Showing Relief of Subjective Parameters of Group A (n= 100)

S. No.	Subjective Parameters	Mean		Mean Dif.	% of Change	SD±	SE±	'p' value	Results
		BT	AT						
1.	Amount of vaginal discharge	2.45	0.45	2.00	81.63	0.8288	0.08288	<0.0001	E.S.
2.	Low-backache	1.98	0.67	1.31	66.16	0.8372	0.08372	<0.0001	E.S.
3.	Dyspareunia	1.74	0.35	1.39	79.88	0.920	0.092	<0.0001	E.S.
4.	Pruritus vulvae	0.97	0.08	0.89	91.75	0.8978	0.08978	<0.0001	E.S.
5.	Post coital bleeding	0.15	0.05	0.10	66.67	0.3015	0.03015	<0.0020	V.S.

E.S. = Extremely significant, V.S. = Very significant; (By- Wilcoxon matched-pairs signed-ranks test)



- **Amount of vaginal discharge** - Before treatment mean score of vaginal discharge was 2.45 which was reduced to 0.45 after treatment. The relief in the symptom was 81.63% which was extremely significant.
- **Low-backache** - Before treatment mean score of Low-backache was 1.98 which was reduced to 0.67 after treatment. The relief in the symptom was 66.16% which was statistically extremely significant.
- **Dyspareunia** - Before treatment mean score of dyspareunia was 1.74 which was reduced to 0.35 after treatment; the relief in the symptom was 79.88% which was statistically extremely significant.
- **Pruritus vulvae** - Before treatment mean score of pruritus vulvae was 0.97 which was reduced to 0.08 after treatment. The relief in the symptom was 91.75% which was statistically extremely significant.
- **Post coital bleeding**- Before treatment mean score of Post coital bleeding was 0.15 which was reduced to 0.05 after treatment. The relief in the symptom was 66.67% which was statistically very significant.

Table No. 8: Showing Relief of Objective Parameters of Group A (n= 100)

S. No.	Objective Parameters	Mean		Mean Dif.	% of Change	SD±	SE±	'p' value	Results
		BT	AT						
1.	Extent of Erosion	2.72	0.55	2.17	79.78	0.5695	0.05695	<0.0001	E.S.

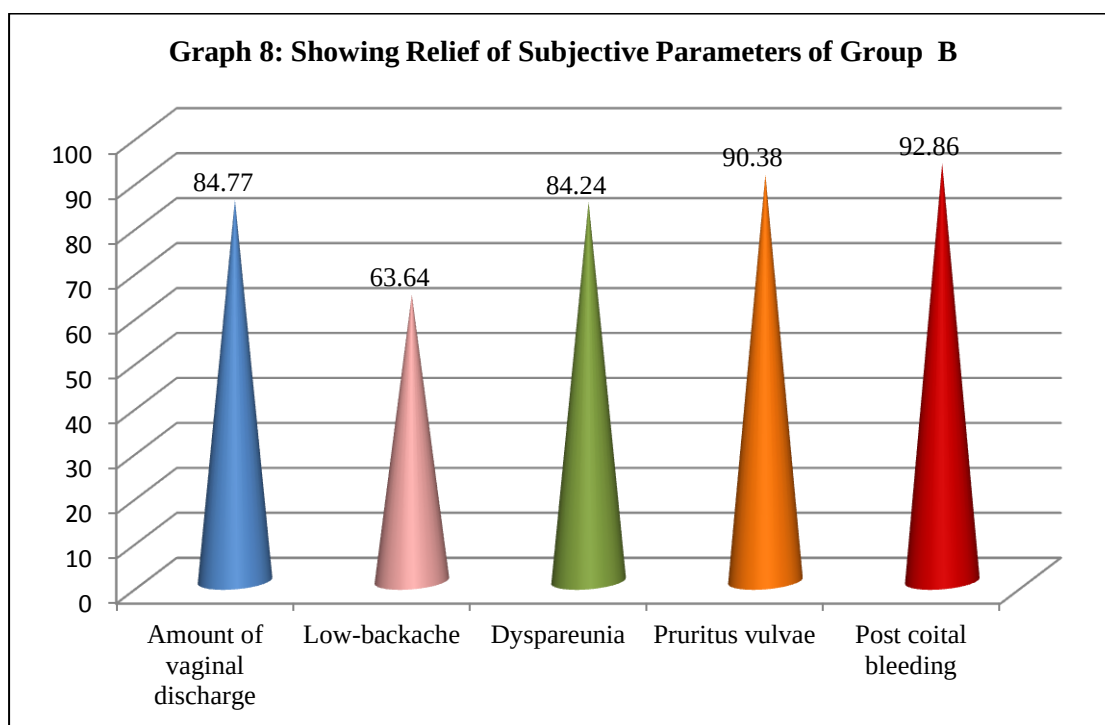
E.S. = Extremely significant; (By- Wilcoxon matched-pairs signed-ranks test)

- **Extent of Erosion** - Before treatment mean score of area of Erosion was 2.72 which were reduced to 0.55 after treatment; the relief in the symptom was 79.78% which was statistically extremely significant.

Table No. 9: Showing Relief of Subjective Parameters of Group B (n= 100)

S No	Subjective Parameters	Mean		Mean Dif.	% of Change	SD±	SE±	'p' value	Results
		BT	AT						
1.	Amount of vaginal discharge	2.56	0.39	2.17	84.77	0.6675	0.06675	<0.0001	E.S.
2.	Low-backache	2.09	0.76	1.33	63.64	0.7661	0.07661	<0.0001	E.S.
3.	Dyspareunia	1.84	0.29	1.55	84.24	0.8805	0.08805	<0.0001	E.S.
4.	Pruritus vulvae	1.04	0.10	0.94	90.38	0.8143	0.08143	<0.0001	E.S.
5.	Post coital bleeding	0.28	0.02	0.26	92.86	0.5617	0.05617	<0.0001	E.S.

E.S. = Extremely significant; (By- Wilcoxon matched-pairs signed-ranks test)



- **Amount of vaginal discharge** -Before treatment mean score of vaginal discharge was 2.56 which was reduced to 0.39 after treatment. The relief in the symptom was 84.77% which was extremely significant.
- **Low-backache** - Before treatment mean score of low-backache was 2.09 which was reduced to 0.76 after treatment. The relief in the symptom was 63.64% which was statistically extremely significant.
- **Dyspareunia** - Before treatment mean score of **dyspareunia** was 1.84 which was reduced to 0.29 after treatment .The relief in the symptom was 84.24% which was statistically extremely significant.
- **Pruritus vulvae** - Before treatment mean score of **pruritus vulvae** was 1.04 which was reduced to 0.10 after treatment. The relief in the symptom was 90.38% which was statistically extremely significant.
- **Post coital bleeding** - Before treatment mean score of Post coital bleeding was 0.28 which was reduced to 0.02 after treatment. The relief in the symptom was 92.86 % which was statistically extremely significant.

Table No. 10: Showing Relief of Objective Parameters of Group B (n= 100)

S. No.	Objective Parameters	Mean		Mean Dif.	% of Change	SD	SE	'p' value	Results
		BT	AT						
1.	Extent of Erosion	2.55	0.38	2.17	85.10	0.6039	0.06039	<0.0001	E.S.

E.S. = Extremely significant; (By- Wilcoxon matched-pairs signed-ranks test)

Extent of Erosion

Before treatment mean score of area of Erosion was 2.55 which was reduced to 0.38 after treatment. The relief in the symptom was 85.10% which was statistically extremely significant.

Table No. 11: Showing Intergroup comparison of Subjective Parameters of group A and group B.

Subjective Parameters	Group	Mean Diff.	SD±	SE±	'p' value	Result
Amount of vaginal discharge	A	2.000	0.8288	0.08288	0.1427	N.S.
	B	2.170	0.6675	0.06675		
Low-backache	A	1.310	0.8372	0.08372	0.9613	N.S.
	B	1.330	0.7661	0.07661		
Dyspareunia	A	1.390	0.9200	0.09200	0.2356	N.S.
	B	1.550	0.8805	0.08805		
Pruritus vulvae	A	0.8900	0.8978	0.08978	0.6213	N.S.
	B	0.9400	0.8143	0.08143		
Post coital bleeding	A	0.1000	0.3015	0.03015	0.0369	S.
	B	0.2600	0.5617	0.05617		

N.S. =Not Quite Significant, S. =Significant; (By-Mann-Whitney test)

In Inter Group comparison there is statistically no significant changes observed in all Parameters except post coital bleeding which is statistically significant.

Table No. 12: Intergroup comparison of Objective Parameters of group A and group B

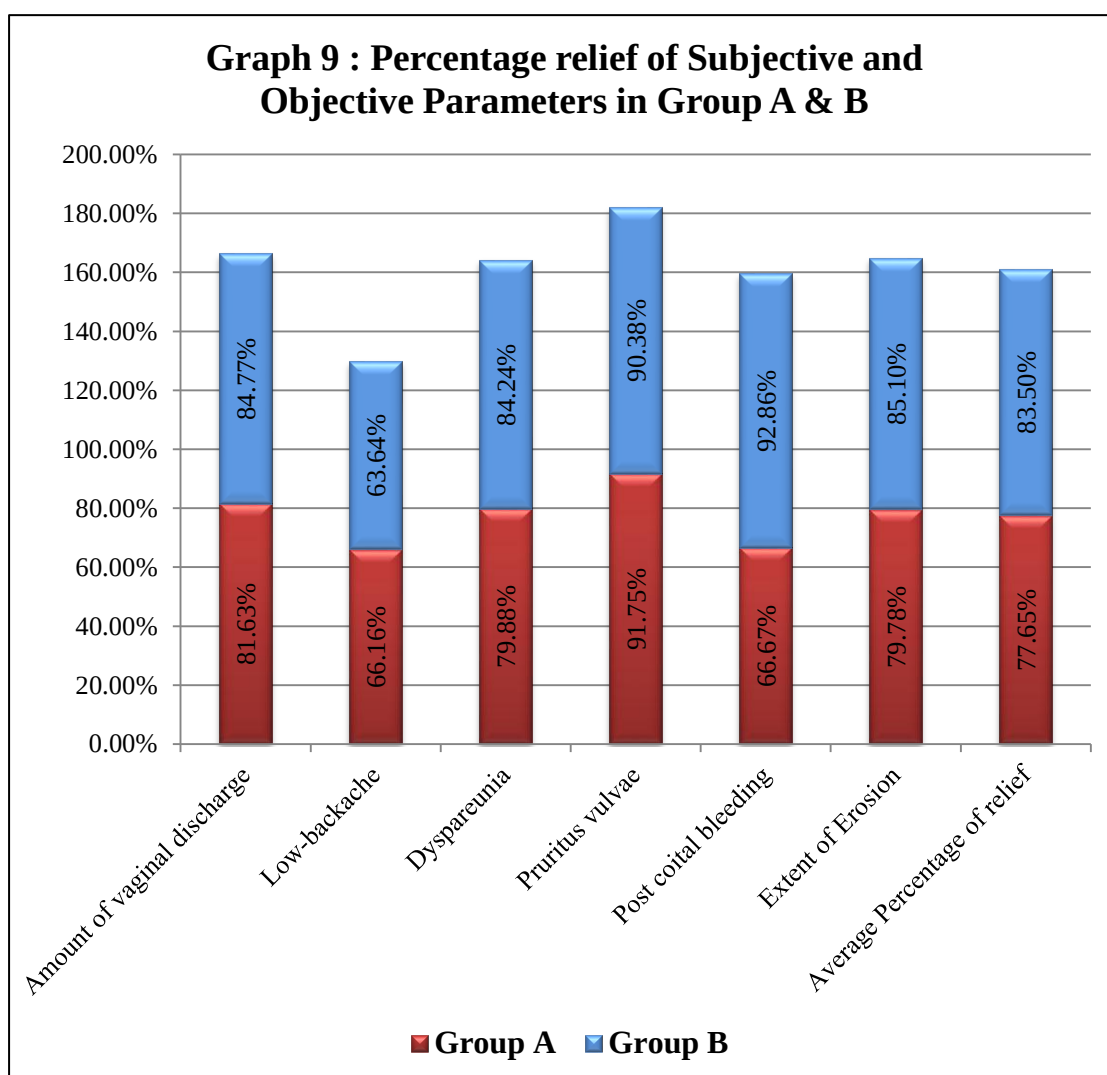
Objective Parameters	Group	Mean Diff.	SD±	SE±	P	Result
Extent of Erosion	A	2.170	0.5695	0.05695	0.9623	N.S.
	B	2.170	0.6039	0.06039		

N.S. =Not Significant; (By-Mann-Whitney test)

In Inter Group comparison there is statistically no significant changes observed in extent of erosion.

Table No. 13: Percentage relief of Subjective and Objective Parameters in Group-A and Group-B.

Sign and Symptoms	RESULT IN PERCENTAGE	
	GROUP A	GROUP B
Amount of vaginal discharge	81.63%	84.77%
Low-backache	66.16%	63.64%
Dyspareunia	79.88%	84.24%
Pruritus vulvae	91.75%	90.38%
Post coital bleeding	66.67%	92.86%
Extent of Erosion	79.78%	85.10%
Average Percentage of relief	77.65%	83.50%



Analysis of percentage relief in subjective and objective parameters after the comparison of group A and group B reveals the following Data-

- **Amount of vaginal discharge:** Maximum percentage of relief i.e. 84.77% in group B, followed by group A in which percentage of relief was, 81.63%
- **Low-backache:** Maximum percentage of relief i.e. 66.16% in group A, followed by group B in which percentage of relief was 63.64%.
- **Dyspareunia:** Maximum percentage of relief i.e. 84.24% in group B, followed by group A in which percentage of relief was 79.88%.
- **Pruritus vulvae:** Maximum percentage of relief i.e. 91.75% in group A, followed by group B in which percentage of relief was, 90.38%.
- **Post coital bleeding:** Maximum percentage of relief i.e. 92.86% in group B, followed by group A in which percentage of relief was, 66.67%.
- **Extent of Erosion:** Maximum percentage of relief i.e. 85.10% in group B, followed by group A in which percentage of relief was, 79.78%.

Average Percentage of relief:

- Comparing the improvement in both groups it was found that Average percentage of relief was higher in 'group B' i.e. 83.50%, followed by 'group A' i.e. 77.65%. It shows that effect of therapy was more in group B in comparison to group A.

DISCUSSION

INTRODUCTION:

In the present study pathological condition Cervical erosion is taken up to evaluate and compare the efficacy of *Apamarga kshara karma* and Diathermy cautery. The disease cervical erosion can be compared with the *Karnini Yonivyapath* as well as *Garbhashaya mukhagata dushta vrana*. The study was carried out under two groups and total 216 patients were recruited for trial. Out of which in Group-I total 109 patients were recruited, and 09 were dropped out from the study due to irregular follow-up, and one patient got conceived during follow-up and hence dropped out from the study. Where as in Group-II total 107 patients were recruited, among them 07 patients were dropped out from the study due to irregular follow-up and worsening of symptoms like profuse vaginal discharge. This was a randomized single blind comparative study and random allocation of patients was done by using chit method.

Table No. 1. Showing Trial and comparative therapies:

Group	No. of patients	Drug/ Therapy
GROUP A Standard control group	100 patients	Electric Cautery
GROUP B Trial group	100 patients	<i>Apamarga Pratisaraniya Mridu Kshara</i>

Table No. 2. Showing Trial Drug: *Apamarga Pratisaraniya Mridu Kshara*

Drugs	Latin name & family	Part Used
APAMARGA	<i>Achyranthesaspera</i> , Amaranthaceae.	<i>Panchanga</i> (whole plant)

Kshara (caustic alkali) is considered as superior among the *Shastra* and *Anusashtra* by *Sushruta* for reason of performing *chedya* (excision), *bhedya* (incision) and *lekhya karma* (scarification) and *tridoshashamaka* properties¹. *Apamarga* is one of the drugs suggested to use for the preparation of *mrudukshara* (mild type)². *Kshara*

is generally of two types *Paniya* (ingestable) and *Pratisaraniya* (pastable). For the purpose of healing of *Dushta vrana* (chronic ulcer/wounds) *Pratisaraniya kshara* is indicated³. Cervical erosion when it becomes chronic it can be considered as *Dushta vrana*. Hence in the present study *Apamarga mridu kshara* was selected as trial drug. Electric cautery is the standard therapy for treating the cervical erosion in modern system of medicine, Hence it was selected as control therapy.

Dialogue on selection of topic:

Cervical erosion is a common condition found in most women of active reproductive age group. Around 85% women suffer from the cervical erosion i.e. benign condition of female genital tract during their lifetime⁴.

Cervix is divided into two parts endocervix and ectocervix. Endocervix is covered by columnar epithelium and ectocervix is covered by squamous epithelium. But in case of erosion, squamous epithelium is replaced by columnar epithelium⁵. Most of the times infection is found to be the reason for change in epithelial covering. But sometimes hormonal changes also play a pivotal role. Patient of cervical erosion usually suffers with offensive, irritant, profuse vaginal discharges, formation of Nabothian follicles in chronic stage, contact bleeding, dyspareunia, intermenstrual bleeding, bowel irritability, pelvic pain etc. Association of erosion with cervicitis leads low back pain⁶. It is also observed as a cause of infertility and constitutional ill health and sometimes it produces great psychological upset in women. If it is left untreated, in the chronic stages, the columnar epithelium undergoes squamous metaplasia⁷.

There is a controversy in treating the cervical erosion in western countries whether to treat cervical erosion or not. Undoubtedly this condition needs treatment, because any injury to the tissue leads to cervical cancer in future. This disease has been found to associate with cervicitis and viral infections. Hence when these conditions are present together they will show oncogeneic potency. So this condition needs treatment to prevent cervical cancers.

Dialogue on selection of therapies:

Since long time specific therapies like diathermy cautery, cryosurgery are practiced and some topical applications also available in the existing modern system of medicine. But none of these therapies are satisfactory in curing the cervical erosion

and most of the times causing side effects like excessive vaginal discharges. Leaving this condition uncured results into development of cervical intraepithelial neoplasia, Cervical erosion etc. Hence it is highly essential to develop an accurate therapy for erosion in the present circumstances.

Previously various authors had studied the effect of different *Mridu Kshara* like *Apamarga*, *Citraka*, *Cirabilva*, *Snuhi*, *Tila*, *Arka* drugs in cases of erosion; considerable number of studies is already carried out with *Apamarga Mridu Kshara* as trial drug. The present study is aimed to evaluate the comparative effect of *Apamarga Pratisaraniya Mridu Kshara* and Electric cautery in Cervical erosion.

DISCUSSION ON CONCEPTS:

A. Concept of disease:

Present study has been taken up to evaluate and compare the clinical efficacy of *Ksharakarma* and Electric cautery in cervical erosion. This clinical entity can be compared with two conditions described in Ayurveda viz., *Karnini yonivyapad* and *Garbhashayagata dushta vrana*. Based on the clinical features and etiology *Karniniyonivyapat* can be considered as early stage of Cervical erosion and *Garbhashaya mukhagata dushta vrana* as chronic stage of erosion.

B. Concept of the drug/therapies:

Early stages of cervical erosion are treated by anti-biotics and chronic cases are treated with electro-cautery and by other local measures like application of Albothyl concentrate. Electro-cautery is associated with mild to moderate complications like cramping pain, profuse vaginal discharge, spotting, cervical stenosis etc. Sometimes need repeated sittings of treatment. Application of albothyl concentrate is found not much effective. Electro cautery is invasive in nature. Hence there is an urgent need to develop treatment that works like cautery, but not invasive in nature. In *Ayurveda Agnikarma* and *Ksharakarma* like parasurgical procedure are described to treat the *Vrana* conditions. These procedures act like invasive treatments and same time do not produce complications.

DISCUSSION ON OBSERVATIONS:

Discussion of the clinical observations of the present study is presented under the following headings:

I. DISCUSSION ON DEMOGRAPHIC DATA**Age:**

Majority i.e. 31.00% patients were found under the age group of 25 to 30 years, followed by 29.00% under 30 to 35 years (Ref: Observation- Table No.2). This shows that women in the active reproductive age are more prone to cervical erosion. This finding corroborates with the textual description of vulnerable age group.

Habitat:

In the present study majority of the women i.e. 89.00% were from rural locality, few women i.e. only 11.00 were from urban side (Ref: Observation-Table No.3). This may be due to the non-availability of advanced health care services in rural side.

Religion:

On observation of religion it was found that majority i.e. 75.50 percentage of women belonged to Hindu religion and few i.e. 24.50% were Muslim (Ref: Observation- Table No. 4). The present disease condition is nothing to do with the religion and the observation is also confirming the same.

Marital Status:

Almost all the women i.e. 99.50% recruited under the trial were married and only one (0.50%) was widow (Ref: Observation- Table No. 5).

Education:

Education wise distribution of patients was shown that majority are distributed under three groups, Illiterate 24.50 %, Primary school education 31.00%, High School 22.50 % (Ref: Observation- Table No. 6).

Occupation:

On observation of occupation of the trial subjects it was found that majority i.e. 85.00% were house wives (Ref: Observation-Table No. 7). Usually the educated

women undergo periodic health check-up and take necessary medication. But house wives are of shy nature, and do not reveal the problem to the family members. This makes the Lecorrhoea, Cervicitis etc., as chronic and these conditions further leads to cervical erosion.

Socio-economic status:

Majority i.e. 68.00 % of the women recruited for the trial was belonged to lower middle class (Ref: Observation-Table 8). The Institute where the study was carried out is a government organization and provides free health services. Naturally majority of the low income group people approach this hospital.

Age of marriage:

Age of marriage was found between 20-25 years in 56.00 percent of women (Ref: Observation- Table No.9). This finding is also corroborating with the age incidence of cervical erosion.

Duration of Married life:

Duration of marital life was found between 10 to 20 years in major number i.e. 49.00 percent of women (Ref: Observation- Table No. 10). Long time active sexual life naturally leads to decreased vaginal and defence and provides opportunity for infections.

Age of Menarche:

In the present study majority i.e. 52.50% of women had age of menarche between 13-14 years. Same is the average age of menarche in India as well as Rajasthan state also. This finding is also confirming the average incidence of age of menarche (Ref: Observation- Table No. 11).

Menstrual Cycle:

In almost all women i.e. 100 % women menstrual cycle was found regular and menstrual flow was within normal limits i.e. between 3-4 days in majority i.e. 54.00 % of the women. Duration on inter-menstrual period was between 21-35 days in 97.50% of cases. Amount of bleeding was normal in almost all the women with the percentage of 97.00% (Ref: Observation- Table No. 11). It is obvious that abnormalities of menstrual cycle have nothing to do with cervical lesions.

Parity:

Women recruited under this trial are either second para (50.50%) or multipara (47.00%). (Ref: Observation- Table No. 12). Cervical erosion is rare to see in nullipara or primipara and findings of the present study are also confirming it.

Frequency of Coitus:

All the women were equally distributed in different durations of coitus frequency like 34.50% women with once a week, 31.50% women with twice a week frequency, 25% women with 3 – 4 times a week frequency (Ref: Observation- Table No.13). This shows that coital frequency has no relation in causing cervical erosion as per the present finding.

Contraceptive History:

It is described in modern review of the disease that use of some contraceptives causes erosion and some provides protection. In the present study it is found that majority i.e. 54.00% of the women had undergone bilateral tubectomy as a choice of contraception (Ref: Observation- Table No. 14). Women who are using oral contraceptive pills were not incorporated into the study, since they cause erosion.

Duration of illness:

Duration of illness was found more than three years in 31.50 % women and 1-2 years in 29.50% women (Ref: Observation- Table No. 15). Almost all the patients were undergone modern medication before taking consultation in department of *Prasutitantra* and *Striroga*, National Institute of *Ayurveda*. This observation gives rise to two kinds of confirmations:

- 1). Duration is always chronic in these cases
- 2). *Ayurvedic* consultation is not the first choice for these patients.

Sharirika Prakriti:

Majority of the women recruited under this study i.e. 42.00% belongs to *Vatapitta prakriti* and 31.00% of women belong to *Kaphavata prakriti*. None of the women found under *Sama Prakriti* (Ref: Observation- Table No. 16).

Personal History:

- Dietary History: All the women were equally distributed under vegetarian (49.50%) and mixed diet (50.50%) (Ref: Observation- Table No. 17). From these finding it can be inferred that both vegetarian and non-vegetarian persons are at same risk for cervical erosion.

- Addictions: Majority i.e. 37.00% of the women was found to have the addiction of drinking of tea or coffee. One interesting finding is that around 03.00% of women were found to have addicted to smoking (Ref: Observation- Table No. 17).
- Bowel Habit: All most all i.e. around 75.50% women are found to have regular bowel habit. Constipation was found in 19.00% women (Ref: Observation- Table No. 17).

Per Speculum examination findings:

1. Vaginal Discharges:

- Amount of discharge: Complaint of profuse discharges was found in majority i.e. 66.50% of women. (Ref: Observation- Table No. 18)
- Colour of discharges: Vaginal discharges were white in colour in almost all i.e. 85.50% of women. (Ref: Observation- Table No. 18)
- Consistency of discharges: Thick consistency was observed in majority i.e. in 62.50% of cases. (Ref: Observation- Table No. 18)
- Foul smell: Smell was observed as foul in 49.00% of women (Ref: Observation- Table No. 18)

2. Cervical changes:

- Size: Cervix was found hypertrophied in majority i.e. 71.50% of women. (Ref: Observation- Table No. 18)
- Site of erosion: Erosion was found involved the whole cervix in 69.00% of women. (Ref: Observation- Table No. 18)
- Nabothian Cyst: This cyst was found present in 40.00% of cases, but it was absent in majority i.e. 60% of cases. (Ref: Observation- Table No. 18)

Per vaginal examination findings:

- Cervical consistency: In all most all women i.e. 100%, cervical consistency was found firm. (Ref: Observation- Table No. 19)
- Cervical motion tenderness: cervical motion tenderness was present in 38.50% cases. (Ref: Observation- Table No. 19)

Vaginal pH:

In majority of the patients i.e. in 63.00% women vaginal pH was found between 6 to 7. (Ref: Observation- Table No. 20).

II. DISCUSSION ON THE RESULTS:

A. Subjective parameters:

a). Amount of vaginal discharges:

- In Group-A, before treatment, 49 (49.00%) patients were found to have severe white discharges per vaginum, and 47 (47.00%) were with moderate amount of discharges. After treatment, 55 (55.00%) patients got complete relief. (Ref: Results- Table No.1)
- In Group-A, before treatment mean score of vaginal discharge was 2.45 and same is reduced to 0.45 after treatment. The percentage relief in the symptom was 81.63% which was found extremely significant ($P < 0.0001$) on statistical analysis (Ref: Results - Table: No. 7).
- In Group-B, before treatment, 57(57.00%) patients were found to have severe white discharges per vaginum, and 42(42.00%) were with moderate amount of discharges. After treatment, in Group-B, total 61 (61.00%) patients got complete relief. The efficacy of *Ksharakarma* and Electric cautery found similar in giving relief of white discharges from vagina (Ref: Results- Table No.1).
- In Group-B, before treatment mean score of vaginal discharge was 2.56 which was reduced to 0.39 after treatment. The relief in the symptom was 84.77% which was extremely significant ($P < 0.0001$) (Ref: Results- Table 9).

b). Low backache:

- In Group-A, before treatment, 35 (35.00%) patients were found to have severe low- backache and 43 (43.00%) were with moderate low-backache. After treatment only 37 (37.00%) patients got complete relief. (Ref: Results- Table No.2)
- In Group-A, before treatment mean score of Low-backache was 1.98 which was reduced to 0.67 after treatment. The relief in the symptom was 66.16% which was statistically extremely significant ($P < 0.0001$)(Ref: Results - Table: No. 7)
- In Group-B, before treatment, 30 (30.00%) patients were found to have severe low-backache, 56 (56.00%) were with moderate and 07 (07.00%) patients were with mild degree of low-backache. After treatment only 26 (26.00%)

patients got complete relief. Electric cautery appears to some extent better in giving relief in low backache caused by cervical erosion.(Ref: Results – Table No. 2)

- In Group-B, before treatment mean score of low-backache was 2.09 which was reduced to 0.76 after treatment. The relief in the symptom was 63.64% which was statistically extremely significant ($P < 0.0001$). (Ref: Results- Table 9)

c). Dyspareunia:

- In Group-A, before treatment, 21 (21.00%) patients were found to have severe Dyspareunia, and 52 (52.00%) were with moderate degree and 07 (07.00%) have mild degree of Dyspareunia. After treatment 65 (65.00%) patients got complete relief and mild degree of Dyspareunia remained in 35 (35.00%) patients. (Ref: Results- Table No.3)
- In Group-A, before treatment mean score of dyspareunia was 1.74 which was reduced to 0.35 after treatment; the relief in the symptom was 79.88% which was found statistically extremely significant ($P < 0.0001$). (Ref: Results - Table: No. 7)
- In Group-B, before treatment, 20 (20.00%) patients were found to have severe Dyspareunia, 58 (58.00%) were with moderate degree and 08 (08.00%) patients were with mild degree of Dyspareunia. After treatment, total 71 (71.00%) patients got complete relief from Dyspareunia. This shows that *Ksharakarma* with *Apamarga* is superior in giving relief from Dyspareunia. (Ref: Results – Table No. 3)
- In Group-B, before treatment mean score of dyspareunia was 1.84 which was reduced to 0.29 after treatment. The relief in the symptom was 84.24% which was statistically extremely significant ($P < 0.0001$). (Ref: Results- Table 9)

d). Pruritus vulvae:

- In Group-A, before treatment, 35 (35.00%) patients were with moderate degree and 27 (27.00%) patients were with mild degree of Pruritus vulvae was found. After treatment, 92 (92.00%) patients were found under complete relief group. (Ref: Results- Table No.4)
- In Group -A, before treatment, mean score of Pruritus vulvae was 0.97 which was reduced to 0.08 after treatment. The relief in the symptom was 91.75%

which was statistically extremely significant ($P < 0.0001$). (Ref: Results - Table: No. 7)

- In Group-B, before treatment 01 (01.00%) patient was found to have severe Pruritus vulvae and 29 (29.00%) were with moderate, 43 (43.00%) patients were with mild degree of Pruritus vulvae. After treatment total 90 (90.00%) patients were found under complete relief group and mild degree of Pruritus vulvae was found in 10 (10.00%) patients only. (Ref: Results – Table No. 4)
- In Group-B, before treatment, mean score of pruritus vulvae was 1.04 which was reduced to 0.10 after treatment. The relief in the symptom was 90.38% which was statistically extremely significant ($P < 0.0001$). (Ref: Results- Table 9)

e). Post-coital bleeding:

- In Group-A, before treatment 03 (03.00%) patients were found to have moderate post coital bleeding, 09 (09.00%) patients mild degree of post coital bleeding. After treatment almost all the patients i.e. total 95 (95.00%) patients were found under complete relief group. (Ref: Results- Table No.5)
- In Group -A, before treatment mean score of Post coital bleeding was 0.15 which was reduced to 0.05 after treatment. The relief in the symptom was 66.67% which was statistically very significant. ($P < 0.0020$). (Ref: Results - Table: No. 7)
- In Group-B, before treatment, 08 (08.00%) were found with moderate post coital bleeding; 12 (12.00%) patients were found to have mild degree of post coital bleeding. After treatment, in Group-B, total 98 (98.00%) patients found in complete relief group. The effect of both the therapies found to be same in giving relief from post coital bleeding. (Ref: Results- Table No. 5)
- In Group-B, before treatment, mean score of Post coital bleeding was 0.28 which was reduced to 0.02 after treatment. The relief in the symptom was 92.86 % which was statistically extremely significant ($P < 0.0001$). (Ref: Results- Table 9)

Intergroup comparison:

On intergroup comparison statistically there is no significant changes observed in parameters namely Amount of vaginal discharge ($P = 0.1427$), Low-backache

($P=0.9613$), Dyspareunia ($P=0.2356$), Pruritus vulvae ($P=0.6213$). But statistically significant change observed with respect to Post-coital bleeding ($P=0.0369$). (Ref: Results- Table No. 11)

II. Objective Parameter:

- In Group-A, before treatment, 75 (75.00%) patients were found to have 76% - 100% of extent, and 22 (22.00%) were found with 51% - 75% extent; 03 (03.00%) patients were with 26%- 50% of extent of erosion. After treatment total 45 (45.00%) patients got complete relief i.e. complete healing of cervical erosion while in 55 (55.00%) patients remained with 26%- 50% extent of erosion on cervix was left. (Ref: Results- Table No.6)
- In Group -A, before treatment mean score of area of Erosion was 2.72 which were reduced to 0.55 after treatment; the relief in the symptom was 79.78% which was statistically extremely significant ($P < 0.0001$). (Ref. Results - Table: No. 8)
- In Group B, 61 (61.00%) patients were found to have between 76%- 100% extent of erosion and 33 (33.00%) were with 51%- 75% extent. After treatment total 62 (62.00%) patients got complete relief in cervical erosion and 38 (38.00%) patients were remained with 26%- 50% extent of erosion. (Ref: Results- Table No.6)
- In Group-B, before treatment mean score of area of Erosion was 2.55 which was reduced to 0.38 after treatment. The relief in the symptom was 85.10% which was statistically extremely significant ($P < 0.0001$). (Ref: Results – Table 10)
- On intergroup comparison statistically there is no significant changes observed in Extent of erosion ($P=0.9623$). (Ref: Results- Table No.12)

III. Discussion and Hypothesis of drug action:

APAMARGA KSHARA:

In the present study to compare the therapeutic efficacy of diathermy cautery, *Ksharakarma* is selected and particularly *Apamarga kshara* was selected.

Mechanism of drug action:

Since *vedic* time in *Vedas* *Apamarga* is considered as an important drug. *Apamarga* has got *katu*, *tikta rasa*, *ruksha*, *tikshna guna*, *ushna veerya* and *katu vipaka*. It exerts therapeutic properties like *chedana*, *tridoshashamaka* predominantly *Kaphahara*, *Vatahara*, *Deepana*, *Pachana*, *medohara* properties. In classics it is indicated in *vrana*, *kushtaroga*, *krimi*, *mutravarodha*, *udararoga*, *swasa*, *hikka*, *kasa* etc properties.

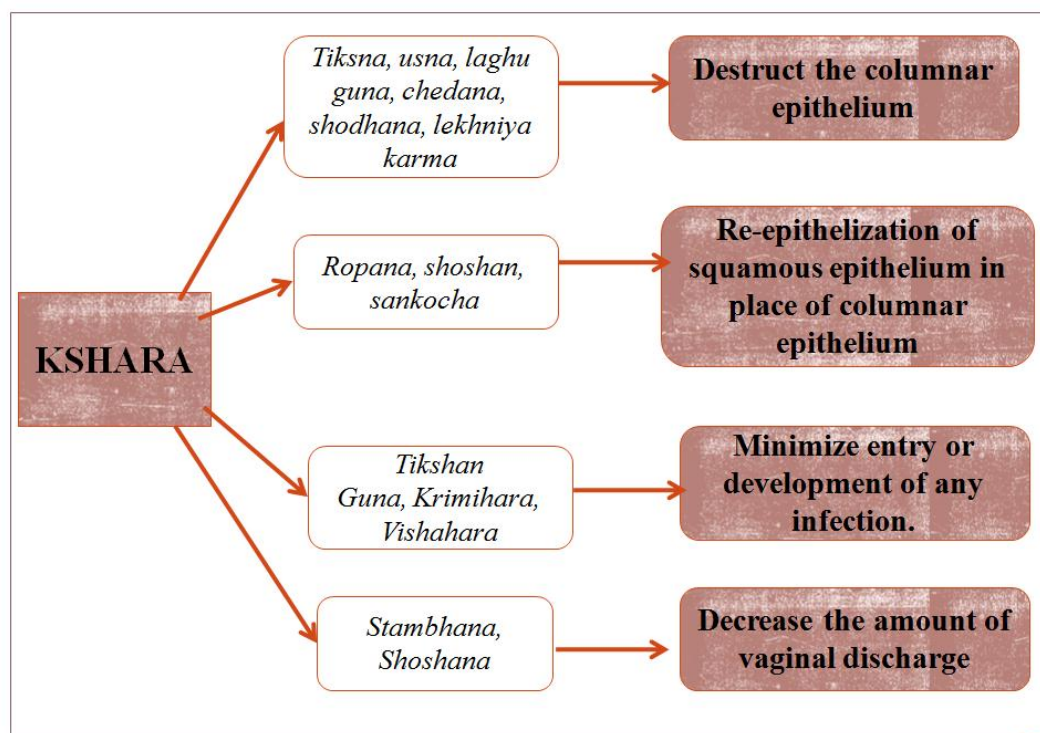
In the present study *pratisaraniya kshara* of *Apamarga* whole plant used. *kshara* is described to use in *dushta vrana*, *kushta*, *arbuda*, *vidradhi* etc. *Pratisaraniya kshara* is three types mild, medium and strong. *Kutaja*, *palasha*, *aragvadha*, *arka*, *snuhi*, *apamarga* etc are the drugs (Su.Su.11/11) described by the *Sushruta* to prepare *kshara* out of these *apamarga* available, abundantly, non-controversial, well studied drug. It is selected in the present study to compare its efficacy with electric cautery.

Mode of action of Apamarga Kshara:

Apamarga is found to have the following pharmacological actions - Anti-inflammatory, anti-arthritic activity, wound healing activity, anti-microbial activity, anti-allergic, anti-oxidant activity. Other activities are nephro-protective, chemo preventive, cardiovascular antidepressant activity, immune modulatory activity. The *Apamarga Kshara* was found strongly alkaline in reaction (pH of 10%w/v Solution in water -10.72) and hygroscopic. Its strong alkaline nature might be responsible for the corrosive action i.e. destruction (slough off) of columnar epithelium, and the re-epithelisation of squamous epithelium. One study have identified ten compounds - namely dodecanol acid, myristic acid, neophytadiene, palmitic acid, heptadecanoic acid, linoleic acid, elaidic acid, 3-7-dimethyl acid, stearic acid and methyl eicos acid, Present in methanolic extract of *Apamarga Kshara* by GC-MS analysis. Identification of the amino acid residues crucial for the interaction between *T. vaginalis* carbamate kinase and these natural compounds is of due scientific interest. *Apamarga Kshara* has been reported to be active against cervical erosion.⁸

Electric cautery is the usual treatment done in cases of cervical erosion. But is an invasive procedure and cause severe side effects like cervical stenosis. In that

comparison, *ksharakarma* is non-invasive and especially side –effect free. It can be described as medical non-invasive scrapping therapy.



Diagrammatic Representation of Mode of Action of Kshara Karma on Cervical Erosion

In the present study, results showed that group-B (trial group *Apamarga kshara karma*) was found superior to electric cautery. Some clinical studies suggest that superficial burning of tissue leads to speedy healing. In cases of electric cautery tissue destructive is done, deeply, whereas in cases of *kshara karma*, instead of destruction of tissue, scrapping of unhealthy tissue is done. This action gives the upper edge of *Kshara karma*. Because in *kshara karma* tissue scrapping is done by medicines/ alkalies and hence chances of cervical stenosis etc are almost nil.

This may be the reason, immediately after procedure in *ksharakarma* patients do not complain profuse vaginal discharges. *Ksharakarma* with *Apamarga* gives an added advantage of wound healing, anti-inflammatory actions. Due to its *vrana hara*, *krimihara* actions this drug takes complete care of cervical erosion in terms of scraping of pathological tissue and healing native epithelium.

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CONCLUSION

The following conclusions are drawn from the present clinical study carried out to compare the efficacy of *Ksharakarma* with Electric-cautery in cases of cervical erosion:

- Cervical erosion is commonest benign cervical condition found in women in active reproductive age group.
- On critical analysis of literature, Cervical erosion can be compared with the *Karnini Yonivyapad* as well as *Garbhashaya mukhagata dushtavrana* depending upon the stage of the condition.
- As *Ksharakarma* is having *vranahara*, *sodhana* and *ropana* properties with minimal or no complications, hence is selected for the present study and compared with standard comparator Electric-cautery.
- There was significant reduction in vaginal discharge, low back ache caused by cervical erosion and pruritus vulvae in both groups.
- In dyspareunia, even though both groups showed significant reduction, but *Ksharakarma* with *Apamarga Mridukshara* is giving slightly better relief.
- In post coital bleeding, *Ksharakarma* with *Apamarga Pratisaraniya Mridukshara* showed better results as compared with Electric-cautery.
- Regarding the extent of erosion, *Ksharakarma* with *Apamarga Pratisaraniya Mridukshara* showed significant reduction as compared to Electric cautery.
- Both the groups were found extremely significant in giving relief from the subjective parameters and objective parameter i.e. reduction in extent of cervical erosion.
- But on comparison of percentage of relief, *Apamaraga Pratisaraneeya Mridukshara* (trial) group was found better than Electric cautery (Standard comparator) group.
- Also application of *Apamarga Pratisaraneeya Mridukshara* was found economical than cauterization.
- The study overall concluded that the trial therapy and the drug - *Apamarga Pratisaraniya mridukshara* shows a better option in treating cervical erosion.

Recommendation for further study

1. Same study should be conducted with larger sample and with longer duration of trial period for better exploration.
2. The study should be conducted using more advanced scientific parameters to know the exact mechanism of therapy and drug on the histology of cervix.
3. Colposcopy should be done before and after treatment so that assessment of healing of erosion can be more precisely studied.
4. By taking longer duration studies one can conclude about late complications and recurrence of disease.

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TILAK MAHARASHTRA VIDHYAPEETH, PUNE

THE LATE P.G. NANAL DEPT. OF AYURVEDA

**ASSESSMENT OF EFFECT OF APAMARGA PRATISARNIYA
KSHARA IN CERVICAL EROSION**

CASE PROFORMA

Case no. :

Registration date:

OPD no. :

IPD no. :

Bed no:

SITE ID : _____ Patient No. _____ Randomization No. _____

Name of the patient :

Age :

Name of the Husband :

Marital status : Married/Widow/Divorce

Religion :

Occupation :labour /student /Housewife

Education : primary/SSC /HSC/ UG/PG/PhD/Other

Economic status :

Poor/Lowermiddle/Middle/Uppermiddle/Rich

Address:

Mobile no:

Chief Complaints:**Vaginal discharge:**

- a) Duration :
- b) Amount - Normal / Scanty/ Profuse
- c) Colour -White/ Curdy white / Yellow / Yellowish green
- d) Consistency - Normal / Thick / Watery/ Purulent/ Blood stained
- e) Foul smell - Present / absent
- f) Vulvo-vaginal symptoms - Itching / Burning / Irritation /Normal
- g) Relation with period - Premenstrual /Mid cycle / Postmenstrual/ Whole cycle

Associated Complaints:

Associated complaints	Duration
Dyspareunia	
Post coital bleeding	
Lower backache	

Menstrual History:

- Age of menarche :
- Regularity - Regular/ Irregular
- Duration of the cycle:
- Length of the cycle :
- Amount of bleeding : Normal / Scanty / Moderate / Excessive
- L.M.P :
- Others :

Obstetric History:

Married life :

No.	Year and Date	Pregnancy events	Labour events	Method of delivery	Puerperium
1.					
2.					

Past Medical History:

Past Surgical history:

Family History :

Sexual History:

- Coital frequency: <1/ 1-2 / 3-4 / 5-6 times – month/week
- Satisfactory/ Unsatisfactory
- Dyspareunia / others

Personal History:

- Food habits : Vegetarian/ mixed diet
- Addiction : Tobacco/coffee/alcohol/ smoking /any other
- Bowel habit : Regular/irregular /constipated/loose motion
Frequency :... times /day
- Bladder habit : Painful / Burning /other
- Frequency-----/day /night
- Drug Allergy :
- Contraceptive History : IUCD / OCP / Barrier / Surgical /Injectable/ Others /
None

Examination:

General examination :

- Built- Obese /Average / Thin
- Nutrition: Average/poor
- Stature :
- Pallor :
- Jaundice:
- Teeth, Gums and Tonsils :
- Neck:

- Oedema of legs:
- Weight: kgs
- Height: cms
- Temp :

Systemic Examination:

- CVS
- RS

Gynecological examination:

A) Breast Examination B) Abdominal Examination C) Pelvic examination

A) Breast examination:

B) Abdominal examination:

P/A :

- Inspection:
- Palpation:
- Percussion:
- Auscultation:

C) Pelvic Examination:

Inspection of external genitalia :

- Appearance :
- Discharge :
- Perineum:
- Any Scar :
- **P/S Examination :**

(a)Vaginal Discharge :

- Amount - Normal / scanty / Profuse
- Colour :white /curdy white/yellow/yellowish green
- Consistency :Normal//thick/watery/purulent/bloodstained
- Foul smell : present/absent

(b) Vaginal mucosa - Normal /Red / Inflammed / Ulcerative / Polyps

(c) Cervix :

- Size : Normal / Hypertrophied
- Shape: Parous / Nulliparous / Pinhole
- Extent of erosion : Upper lip / Lower lip/ Whole Cx/ Around os
- Any abnormal growth : Present /Absent
- Nabothian cyst : Present /Absent

P/V Examination :

(a) Vaginal wall : Tenderness - Tender/ Non -tender

(b) Cervix : Position : Upward/ Downward / Mid position
Consistency : Firm / Hard / Soft
Mobility : Freely mobile / Fixed
Tenderness : Tender/ Non-tender

(c) Uterus : Size : Normal / Bulky / Small
Shape : Regular / Irregular
Position : AVAF / RVRF / Deviated
Mobility : Freely mobile / Fixed
Tenderness : Tender / Non-tender

(d) Fornices:**Ashtavidha Pariksha:**

- Nadi : Mutra:
- Mala : Jihwa:
- Shabda: Sparsha:
- Drik : Akriti:

Dashavidha Pariksha -

1.	Prakriti	Shareera V / P / K / VP / PK / KV / Tridoshaj							
2.	Vikriti	Prakriti samsamavaya / Vikriti vishamasamavaya							
3.	Sara	Twak	Rakta	Mansa	Meda	Asthi	Majja	Sukra	Satva
4.	Samhanana	Avar			Madhyama		Uttama		
5.	Pramana	Avar			Madhyama		Uttama		
6.	Satmya	Ekrasa/ sarvarasa/ vyamishra/ sheeta/ ushna/snigdha/ ruksha							
7.	Satva	Avar			Madhyama		Uttama		
8.	Ahara Shakti	Avar			Madhyama		Uttama		

9.	Vyayama Shakti	Avar	Madhyama	Uttama
10.	Vaya	Bala	Madhya	Jirna

Treatment groups :

- **Group –A :** Electric Cautery
- **Group – B :** Apamarga Pratisaraniya Mridu Kshara

Duration : Two months**LABORATORY INVESTIGATIONS:****BEFORE TREATMENT-**

- Blood : Hb% ,TLC ,DLC, ESR.
- CT, BT.
- HIV, VDRL, HBsAg.
- BSL –Fasting , Post prandial
- Mountoux test
- Complete urine examination –Routine & Microscopic.
- Vaginal pH
- Vaginal Swab Culture
- Pap Smear
- Colposcopy (If possible)
- USG of uterus and Adnexae. (If required)

FOLLOW UP STUDY

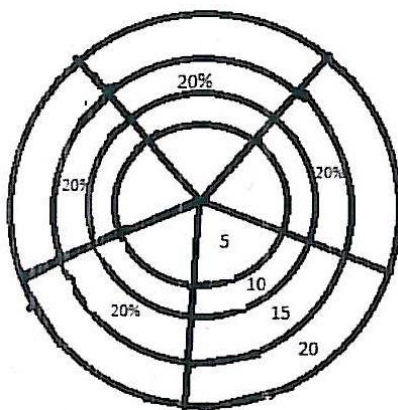
Parameters	BT	Follow up during trial				Follow up after trial	
		1 st week	2 nd week	3 rd week	4 th week	After treatment	At one month
Amount of vaginal discharge							
Low backache							
Dyspareunia							
Pruritus vulvae							
Post coital bleeding							
Extent of cervical erosion							

CRITERIA OF ASSESSMENT

I. Subjective Parameters:

Parameter	Gradation
1. Amount of vaginal discharge • Normal (no c/o discharge) • Mild - Occasional (slight wetting of under garments on/off) • Moderate – moderate wetting of under garments • Severe - Excessive outpouring discharges from vagina	0 1 2 3
2. Low backache** • Absent • Mild - Occasional (no interference with daily routine) • Moderate – Backache during any effort and forward bending (interference with daily routine and relief after taking medicine) • Severe- Excessive (affect daily routine, no relief taking medicine) ** Low back pain will be assessed with Visual analogue scale.	0 1 2 3
3. Dyspareunia • Absent • Mild Pain during coitus • Moderate Pain during forceful coitus • Severe pain - Patient tries to avoid marital relationship	0 1 2 3
4. Pruritis vulvae • Absent • Mild – Occasional • Moderate - Disturb daily routine/ increase after specific time like- menstruation, micturation etc. • Severe - Intolerable itching (affects routine activity)	0 1 2 3
5. Post coital bleeding • Absent • Mild- only spotting • Moderate- blood stained mucous discharge • Severe- fresh blood discharge	0 1 2 3

II. Objective Parameters:



1. Extent of erosion*	
• Erosion - 0% to 25% area of cervix	0
• Erosion - 26% to 50% area of cervix	1
• Erosion - 51% to 75% area of cervix	2
• Erosion - 76% to 100 % area of cervix	3

PERCENTAGE OF RELIEF :

No relief	0% -25% relief in the signs and symptoms
• Mild relief	26% -50% relief in the signs and symptoms
• Moderate Relief	51% -75% relief in the signs and symptoms
• Excellent Relief	76-100% relief in the signs and symptoms

VISUAL ANALOG SCALE:

--	--	--	--	--	--	--	--	--	--

1

2

3

4

5

6

7

8

9

10

NO PAIN

WORST PAIN

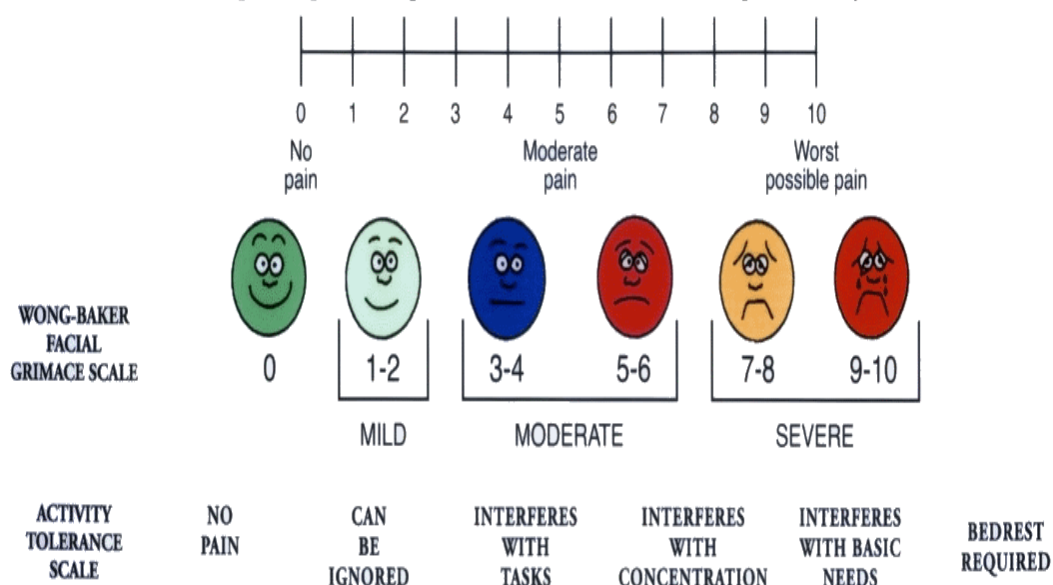
IMAGINABLE

And further it is assessed as follows—

0	no pain	Grade 0
1 - 3	mild pain	Grade 1
4 - 6	moderate pain	Grade 2
7 - 10	severe pain	Grade 3

UNIVERSAL PAIN ASSESSMENT TOOL

This pain assessment tool is intended to help patient care providers assess pain according to individual patient needs. Explain and use 0-10 Scale for patient self-assessment. Use the faces or behavioral observations to interpret expressed pain when patient cannot communicate his/her pain intensity.



Adverse Event :

Adverse Reaction :

Signature of Scholar

Signature of Guide

CONSENT FORM

ASSESSMENT OF EFFECT OF APAMARGA PRATISARNIYA KSHARA IN CERVICAL EROSION in N.I.A. Jaipur. Your participation in the study is voluntary. You may refuse to participate. Without this affecting in any way the medical treatment that you are receiving. If you agree to participate in this study we will collect relevant information from you/your hospital records. Data from the study will be used for research purposes only. The research result is of no significance to your medical care. There will be no direct benefit to you other than satisfaction of participating in this research for the possible benefit of future generations. Your participation will give us insights into the problems faced by the patients like you & this will help us in improving our services. The information concerning your participation in the study will be kept confidential to the full extent permitted by law & will be used only for scientific purpose.

I have read the explanation about this study & I hereby consent to take part in the study.

Signature of Patient

Signature of Witness

सहमति-पत्र

यह अध्ययन राष्ट्रीय आयुर्वेद संस्थान, जयपुर में *ASSESSMENT OF EFFECT OF APAMARGA PRATISARNIYA KSHARA IN CERVICAL EROSION* के लिए है। इस अध्ययन में आपकी भागीदारी आपकी स्वायत्तता पर निर्भर है। आप इस अध्ययन में भाग लेने से मना कर सकते हैं। इससे आपको मिलने वाले इलाज पर कोई प्रभाव नहीं पड़ेगा।

अगर आप इस अध्ययन में अपनी भागीदारी से सहमत हैं तो आपसे/आपके हास्पिटल रिकार्ड से आवश्यक आंकड़े एकत्र किए जायेंगे। इस अध्ययन से मिलने वाले तथ्यों को अनुसंधान के लिए इस्तेमाल किया जाएगा। इस अनुसंधान के परिणाम का आपके इलाज पर कोई प्रभाव नहीं पड़ेगा। अनुसंधान के परिणाम का आने वाली पीढ़ियों को लाभ मिलेगा और हमें आपके जैसे बिमारियों से ग्रसित रोगियों के इलाज को बेहतर करने में मदद मिलेगी। आपकी भागीदारी से सम्बन्धित तथ्यों को पूर्णतः नियमानुसार गुप्त रखा जाएगा और केवल अनुसंधान के लिए प्रयोग किया जाएगा।

मैंने पूरी तरह से अनुसंधान के विवरण को पढ़ लिया है और इसमें भागीदारी की सहमति देता हूँ/देती हूँ।

हस्ताक्षर (मरीज)

हस्ताक्षर (गवाह)

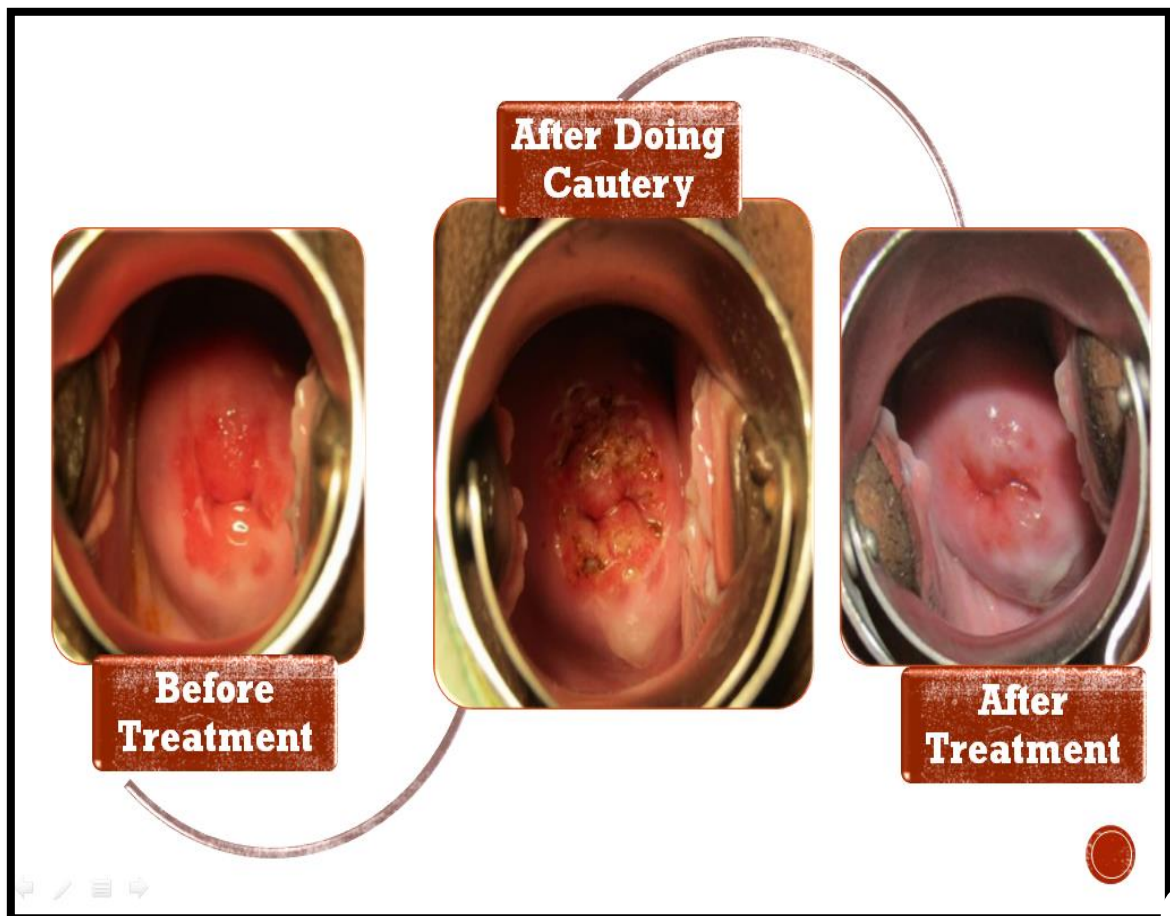
Signature of scholar	Signature of guide
DR. B.PUSHPALATHA ASST. PROFESSOR, P.G. Dept. of Prasuti and Stri Roga NIA, Jaipur	DR.SUJATA KADAM PROFESSOR & HOD P.G. Dept. of Prasuti & Stri Roga Tilak Ayurveda Mahavidhyalaya, Pune

CASE STUDY-1

A 35 years old female patient with complaints of profuse thick white foul smelling discharge P/V with itching & vulvo-vaginal burning since 1 year. Also complaints of dyspareunia 3 years and low back ache since 2-3 years

- Menstrual history- Regular; Obs. History- G₃P₃L₃
- P/S- examination:- Vaginal mucosa normal, thick white discharge present, Cervix normal size with extent of erosion on upper lip and lower lip i.e. 65%
- P/V- Cx downward, firm, All fornices non tender, Uterus normal size shape, , AVAF, freely mobile

Treatment- Group A (Electric cautery)

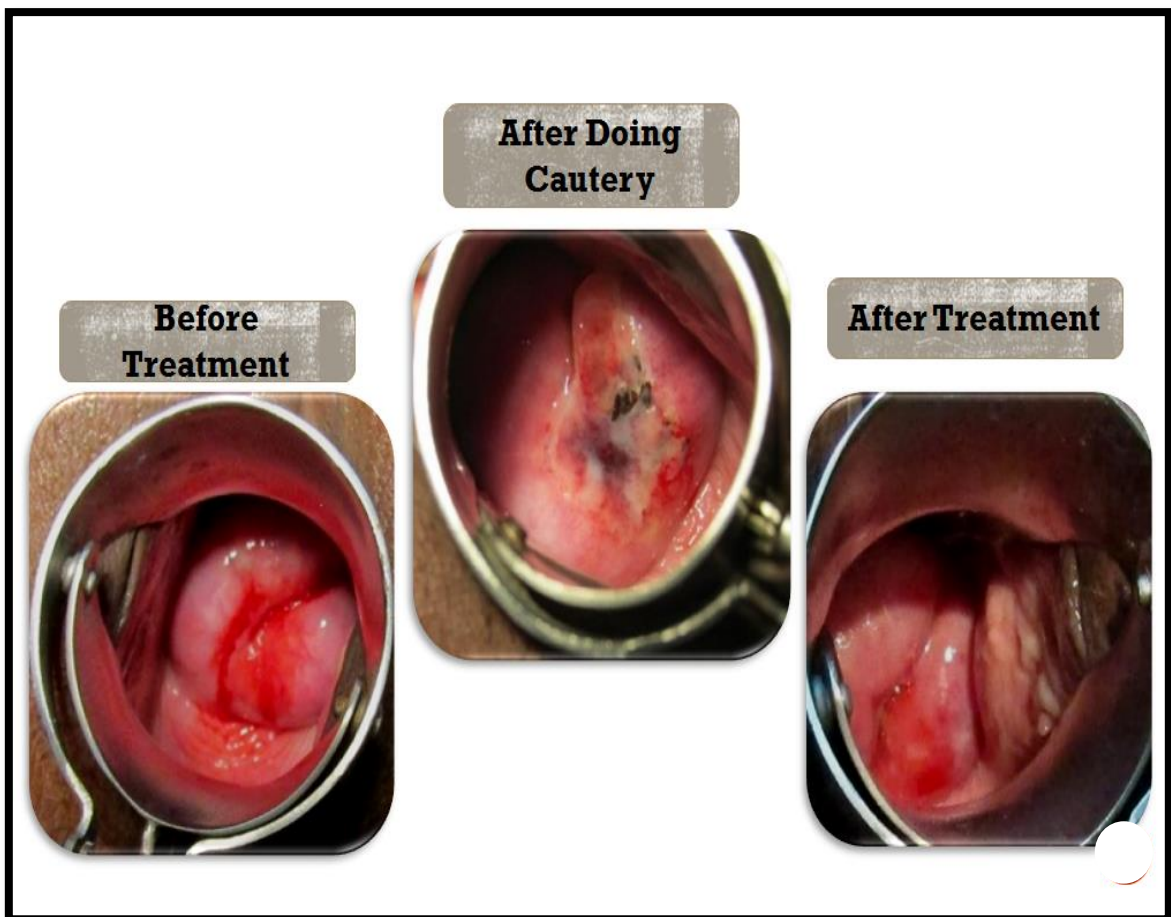


CASE STUDY-2

A 32 years old lady with complaints of thick white discharge P/V 7 months along with backache

- Menstrual history- Regular; Obs. History- G₂P₂L₂
- P/S- thick white discharge present, vaginal mucosa normal, Cervix normal size with extent of erosion upper and lower lips i.e. 50%
- P/V- Cx- downward, firm, mobile, non-tender, Uterus- bulky, regular, AV AF, mobile, non-tender, All fornices- non tender

Treatment- Group A (Electric cautery)

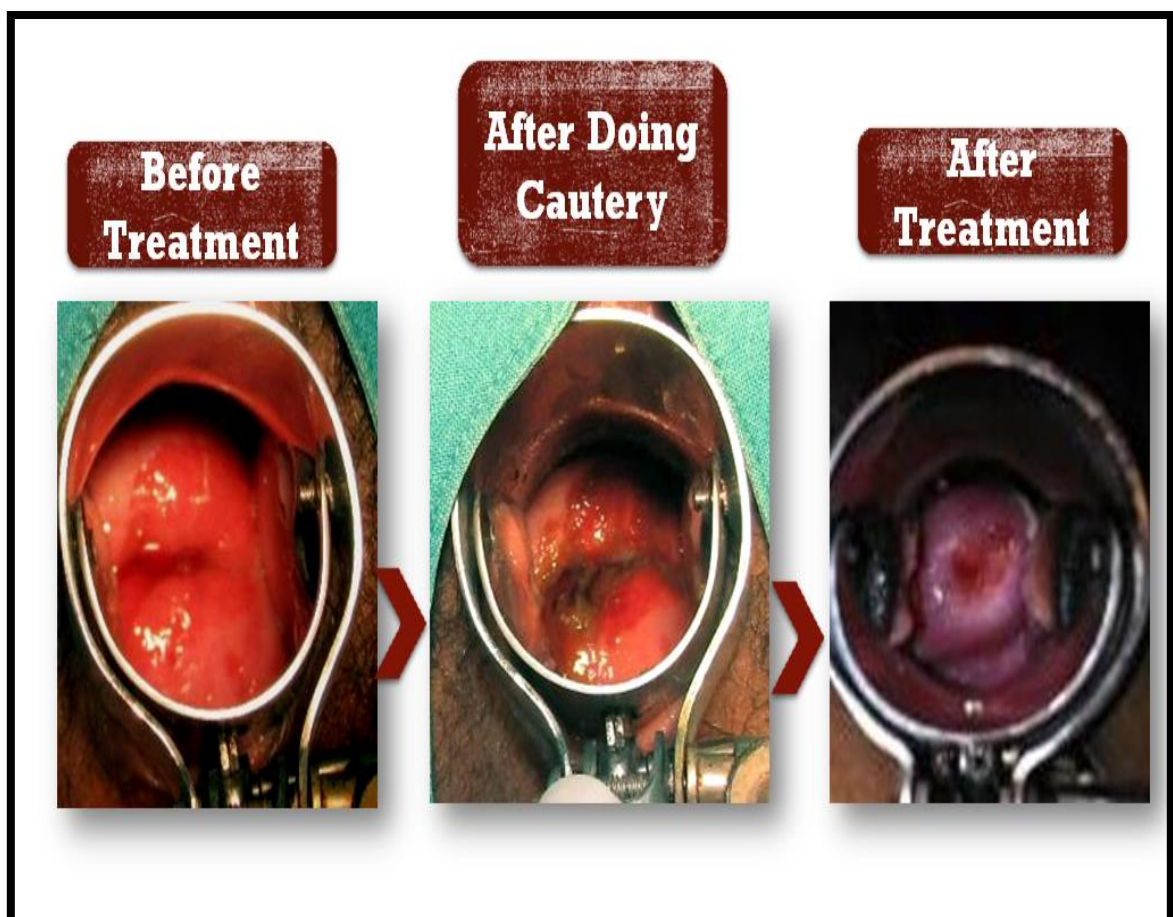


CASE STUDY-3

A 33 years old lady with complaints of thick white discharge P/V 2 years along with backache and dyspareunia since 6 months

- Menstrual history- 6-7/28 days; Obs. History- G₃P₃L₃
- P/S- thick white discharge present, vaginal mucosa normal, Cervix normal size with extent of erosion almost whole cervix i.e. 85%
- P/V- Cx- downward, firm, mobile, non-tender, Uterus- normal size, regular, AVAF, mobile, non-tender, All fornices- non tender

Treatment- Group A (Electric cautery)

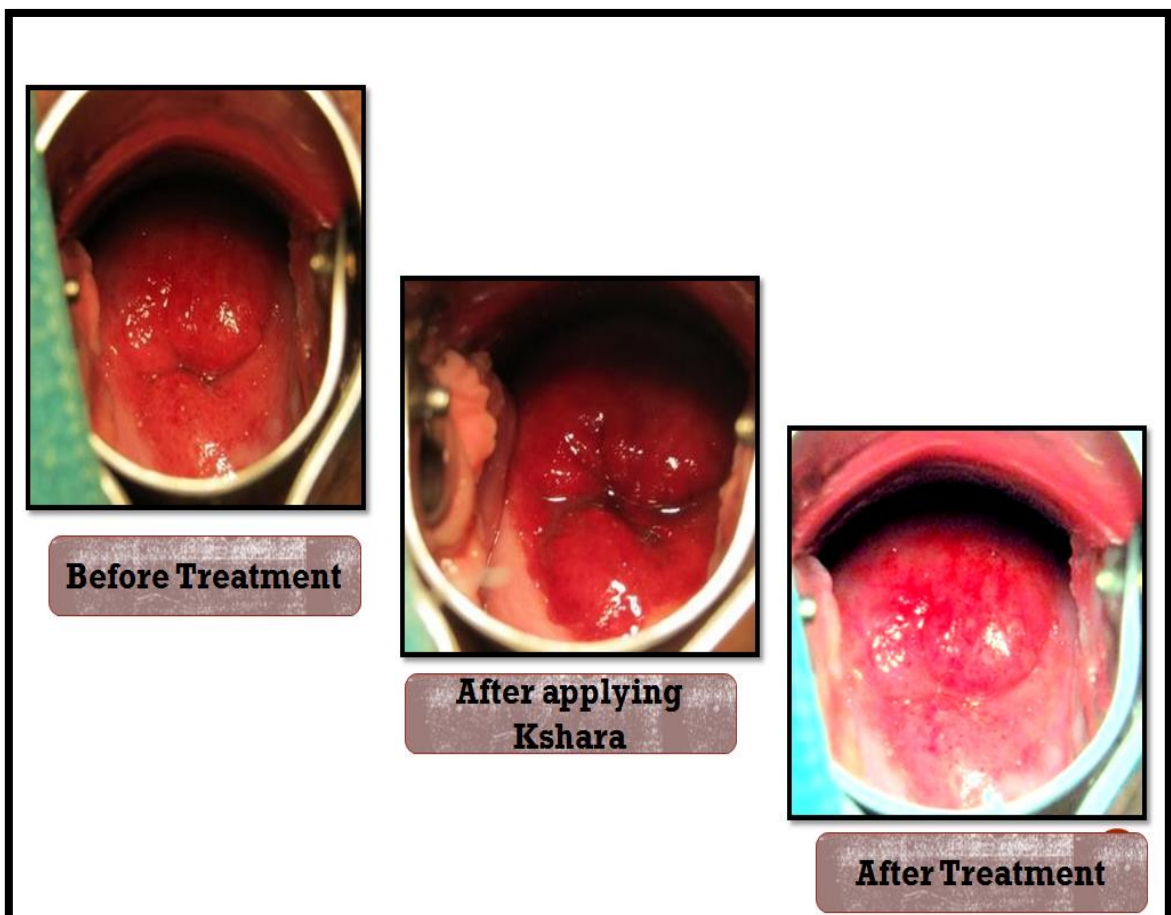


CASE STUDY-4

A 32 years old lady with complaints of profuse thick white discharge P/V along with low backache since 2 years

- Menstrual history- Regular; Obs. History- G₄P₄L₄
- P/S- thick white discharge present, vaginal mucosa normal, Cervix hypertrophied with extent of erosion whole cervix. i.e. 100%
- P/V- Cx- downward, firm, mobile, non-tender, Uterus- bulky, regular, AVAF, mobile, non-tender, All fornices- non tender

Treatment- Group B- Kshara Karma

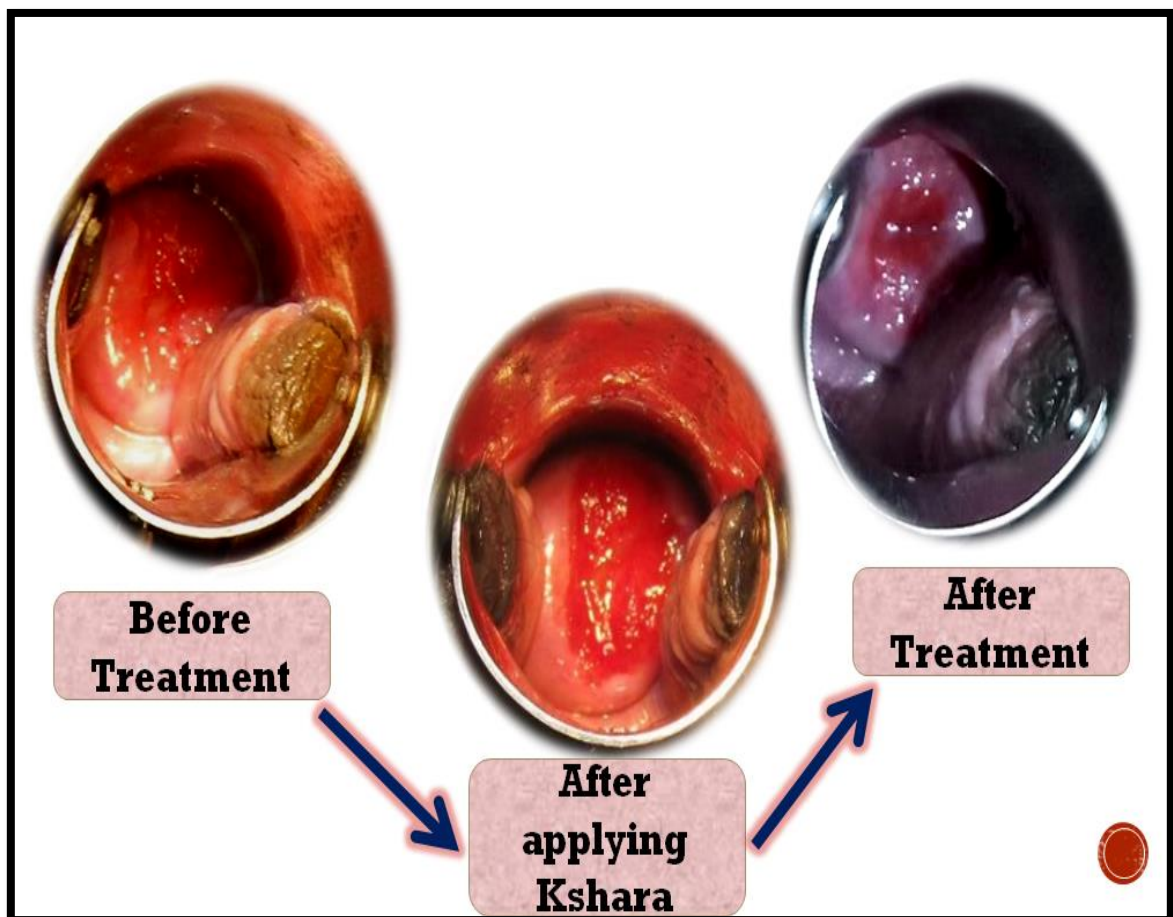


CASE STUDY-5

A 40 years old lady with complaints of thick white discharge P/V 11 years along with backache and dyspareunia since 1.5 years

- Menstrual history- Regular; Obs. History- G₄P₄L₄
- P/S- thick white discharge present, vaginal mucosa normal, Cervix normal size with extent of erosion almost whole of cervix i.e. 75%
- P/V- Cx- downward, firm, mobile, non-tender, Uterus-bulky, regular, AVAF, mobile, non-tender, All fornices- non tender

Treatment- Group B- Kshara Karma

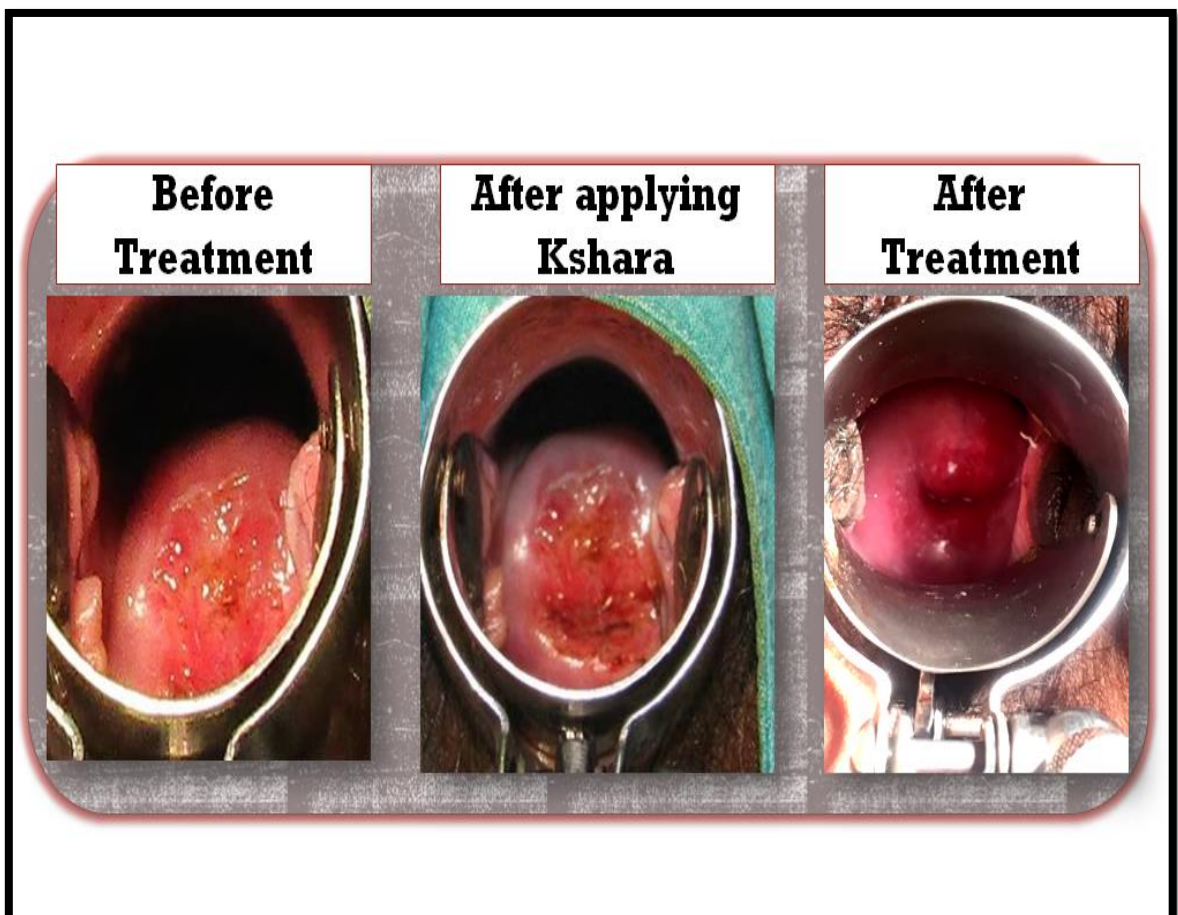


CASE STUDY-6

A 35 years old lady with complaints of thick white discharge P/V 10-11 years along with backache and dyspareunia since 1 year

- Menstrual history- Regular; Obs. History- G₂P₂L₂
- P/S- thick white discharge present, vaginal mucosa normal, Cervix hypertrophied in size with extent of erosion upper & lower lips i.e. 75%
- P/V- Cx- downward, firm, mobile, non-tender, Uterus- normal size, regular, AVAF, mobile, non-tender, All fornices- tender

Treatment- Group B- Kshara Karma

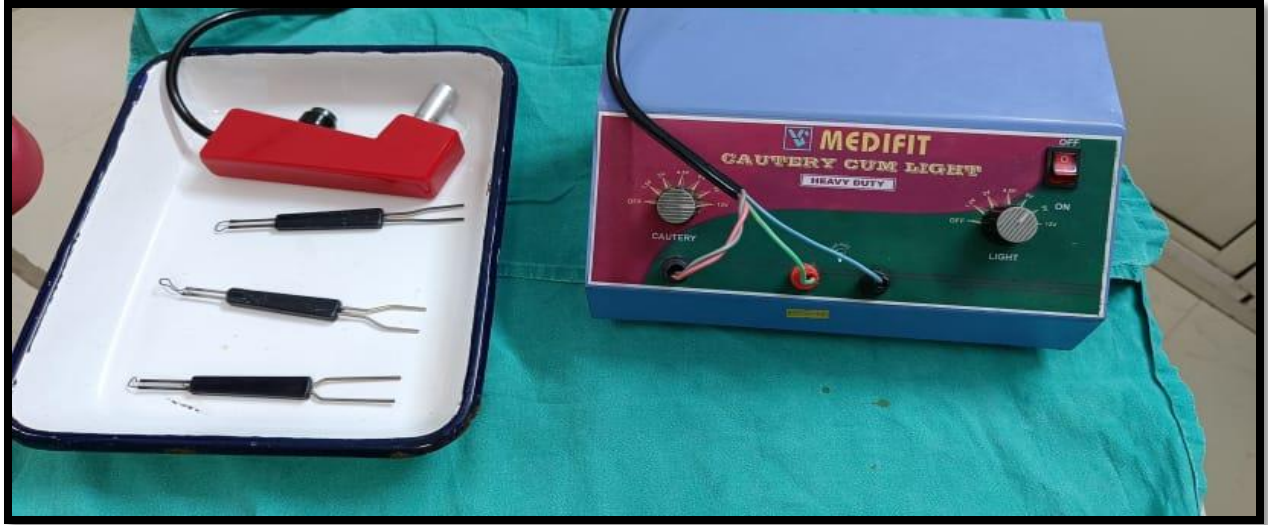




Trolley for Kshara Karma



During Procedure



Cautery Machine & Probes



During Cauterization procedure

MASTER CHART OF GROUP A

S.No.	OPD/IPD Regd. No.	Date of Regd.	Procedures	Age (Years)	Habitat	Religion	Married Status	Occupation	Educational Status	Socio economics status	Contraceptive History	Age of Marriage (Yr.)	Parity	Menstrual History				
														Age of menarche	Regularity	Duration of the cycle	Length of the Cycle	Amount of Bleeding
1	2225012016	25/01/2016	ELECTRIC CAUTRY	33	Rural	Hindu	Married	Housewife	High School	Middle Class	Barrier	21	G4P3L3A1	11 years	Regular	3-4 Days	28 Days	Normal
2	14511032017	11/03/2017	ELECTRIC CAUTRY	37	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	23	G4P3L3A1	16 years	Regular	3 Days	24-28 Days	Normal
3	10506032017	24/04/2017	ELECTRIC CAUTRY	28	Rural	Hindu	Married	Housewife	UG	Lower Middle	TL	18	G2P2L2A0	15 Years	Regular	5-6 Days	28-30 Days	Normal
4	23108072017	29/08/2017	ELECTRIC CAUTRY	24	Rural	Hindu	Married	Housewife	Illiterate	Lower Middle	TL	25	G2P1L1A1	14 years	Regular	2 Days	26-34 Days	Normal
5	15206102017	04/10/2017	ELECTRIC CAUTRY	40	Rural	Hindu	Married	Housewife	Illiterate	Lower class	TL	21	G4P4L4A0	16 Years	Regular	4 Days	28-32 Days	Normal
6	50011122017	11/12/2017	ELECTRIC CAUTRY	33	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	24	G2P2L2A0	15 years	Regular	4 Days	30 Days	Normal
7	29903012018	03/01/2018	ELECTRIC CAUTRY	40	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	21	G2P2L2A0	13 Years	Regular	3 Days	45-60 Days	Normal
8	57905012018	05/01/2018	ELECTRIC CAUTRY	40	Rural	Hindu	Married	Housewife	Illiterate	Lower Middle	TL	19	G2P2L2A0	14 Years	Regular	2 Days	26-34 Days	Normal
9	21018012018	18/01/2018	ELECTRIC CAUTRY	35	Rural	Muslim	Married	Housewife	High School	Middle Class	None	24	G3P2L3A1	13 Years	Regular	5 Days	28-32 Days	Normal
10	22818022018	18/02/2018	ELECTRIC CAUTRY	29	Rural	Hindu	Married	Housewife	UG	Lower Middle	TL	23	G3P3L2A0D1	15 years	Regular	6-7 Days	25-28 Days	Normal
11	7706022018	25/02/2018	ELECTRIC CAUTRY	35	Rural	Hindu	Married	Housewife	Primary	Lower Middle	None	21	G2P2L2A0	14 years	Regular	5 Days	30 Days	Normal
12	33107032018	08/03/2018	ELECTRIC CAUTRY	40	Rural	Muslim	Married	Housewife	Illiterate	Lower class	TL	18	G4P4L4A0	11 Years	Regular	5-6 Days	25-30 Days	Normal
13	7215032018	17/03/2018	ELECTRIC CAUTRY	25	Rural	Muslim	Married	Housewife	Primary	Lower class	None	25	G2P2L2A0	14 years	Regular	2 Days	60-90 Days	Scanty
14	18121042018	24/04/2018	ELECTRIC CAUTRY	27	Rural	Hindu	Married	Housewife	Illiterate	Lower class	TL	25	G2P2L2A0	13 years	Regular	4-5 Days	28-30 Days	Normal
15	11912042018	04/05/2018	ELECTRIC CAUTRY	27	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	20	G3P3L3A0	15 Years	Regular	3 Days	28 Days	Normal
16	47411062018	13/06/2018	ELECTRIC CAUTRY	36	Rural	Hindu	Married	Housewife	Illiterate	Lower Middle	TL	24	G3P3L3A0	14 years	Regular	1-2 Days	30 Days	Normal
17	45004062018	13/06/2018	ELECTRIC CAUTRY	30	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	None	25	G2P2L2A0	14 years	Regular	3 Days	30 Days	Normal
18	21105072018	05/07/2018	ELECTRIC CAUTRY	35	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	23	G4P4L4A0	12 Years	Regular	4 Days	30 Days	Normal
19	22218072018	01/09/2018	ELECTRIC CAUTRY	25	Rural	Muslim	Married	Housewife	PG	Lower Middle	Barrier	21	G2P2L2A0	15 Years	Regular	3 Days	31-32 Days	Normal
20	48425092018	19/09/2018	ELECTRIC CAUTRY	32	Rural	Muslim	Married	Housewife	Primary	Lower Middle	Barrier	24	G4P4L4A0	15 Years	Regular	3-4 Days	30 Days	Normal
21	10176	08/10/2018	ELECTRIC CAUTRY	35	Rural	Muslim	Married	Housewife	Primary	Lower Middle	Barrier	21	G3P3L3A0	14 Years	Regular	2 Days	28-30 Days	Normal
22	812122018	12/12/2018	ELECTRIC CAUTRY	25	Rural	Hindu	Married	Housewife	Primary	Lower Middle	None	25	G2P2L2A0	13 Years	Regular	4 Days	26-28 Days	Normal
23	37217122018	17/12/2018	ELECTRIC CAUTRY	29	Rural	Hindu	Married	Housewife	High School	Lower Middle	None	23	G3P3L3A0	15 Years	Regular	2 Days	28-30 Days	Normal
24	711122018	18/12/2018	ELECTRIC CAUTRY	39	Rural	Hindu	Widow	Housewife	UG	Middle Class	TL	25	G2P2L2A0	13 Years	Regular	3-4 year	24-25 Days	Normal
25	14018122018	18/12/2018	ELECTRIC CAUTRY	37	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	29	G4P3L3A1	16 Years	Regular	3 Days	24-28 Days	Normal
26	19824122018	24/12/2018	ELECTRIC CAUTRY	27	Rural	Hindu	Married	Housewife	Illiterate	Lower class	TL	18	G4P4L4A0	16 years	Regular	4 Days	28-32 Days	Normal
27	72926122018	26/12/2018	ELECTRIC CAUTRY	37	Rural	Muslim	Married	Housewife	Primary	Lower Middle	Barrier	29	G3P3L3A0	14 Years	Regular	2 Days	28-30 Days	Normal
28	70526122018	26/12/2018	ELECTRIC CAUTRY	31	Rural	Hindu	Married	Housewife	Primary	Lower Middle	Barrier	24	G3P2L2A1	11 Years	Regular	6 Days	24-28 Days	Normal
29	24931122018	31/12/2018	ELECTRIC CAUTRY	35	Rural	Hindu	Married	Service	UG	Upper Middle	TL	28	G3P3L3A0	14 Years	Regular	1-2 Days	30 Days	Normal
30	9802012019	02/01/2019	ELECTRIC CAUTRY	30	Rural	Hindu	Married	Labour	Illiterate	Lower class	None	19	G2P2L2A0	14 Years	Regular	3-4 Days	25-30 Days	Normal
31	27803012019	03/01/2019	ELECTRIC CAUTRY	30	Rural	Hindu	Married	Labour	High School	Lower Middle	TL	23	G4P4L4A0	13 Years	Regular	4 Days	20-22 Days	Normal
32	74203012019	03/01/2019	ELECTRIC CAUTRY	30	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	28	G3P3L3A0	14 Years	Regular	5 Days	35-40 Days	Normal
33	24104012019	04/01/2019	ELECTRIC CAUTRY	39	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	20	G2P2L2A0	15 Years	Regular	7 Days	25-26 Days	Normal
34	13004012019	04/01/2019	ELECTRIC CAUTRY	22	Urban	Hindu	Married	Service	UG	Upper Class	TL	32	G1P1L1A0	13 Years	Regular	3-4 year	24-25 Days	Normal
35	38504012019	04/01/2019	ELECTRIC CAUTRY	32	Rural	Hindu	Married	Housewife	PG	Upper Middle	Barrier	25	G4P3L3A1	11 Years	Regular	3-4 Days	28 Days	Normal
36	45805012019	05/01/2019	ELECTRIC CAUTRY	34	Rural	Muslim	Married	Housewife	Primary	Lower Middle	None	19	G4P4L4A0	13 Years	Regular	6 Days	38-30 Days	Normal

37	37007012019	07/01/2019	ELECTRIC CAUTRY	36	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	28	G2P2L3A0	15 years	Regular	5-6 Days	28-30 Days	Normal
38	28007012019	07/01/2019	ELECTRIC CAUTRY	30	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	24	G2P2L2A0	15 Years	Regular	3-4 year	30 Days	Normal
39	24608012019	08/01/2019	ELECTRIC CAUTRY	28	Rural	Hindu	Married	Service	PG	Upper Middle	TL	29	G2P2L2A0	14 years	Regular	2 Days	30 Days	Scanty
40	55708012019	08/01/2019	ELECTRIC CAUTRY	35	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	20	G3P3L3A0	15 years	Regular	3 Days	28 Days	Normal
41	38509012019	09/01/2019	ELECTRIC CAUTRY	25	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	26	G1P1L1A0	14 years	Regular	5 Days	35-40 Days	Normal
42	37410012019	10/01/2019	ELECTRIC CAUTRY	34	Rural	Muslim	Married	Housewife	Primary	Lower Middle	Barrier	23	G3P3L3A0	14 years	Regular	2 Days	28-30 Days	Normal
43	67810012019	10/01/2019	ELECTRIC CAUTRY	35	Urban	Hindu	Married	Housewife	UG	Middle Class	TL	26	G2P2L2A0	13 years	Regular	3-4 Days	24-25 Day	Normal
44	68410012019	10/01/2019	ELECTRIC CAUTRY	35	Rural	Hindu	Married	Housewife	Intermedia	Middle Class	TL	25	G3P2L2A1	13 years	Regular	4 Days	28 Days	Normal
45	68310012019	10/01/2019	ELECTRIC CAUTRY	35	Rural	Hindu	Married	Service	UG	Upper Middle	Barrier	26	G4P3L3A1	11 years	Regular	3-4 Days	28 Days	Normal
46	68710012019	10/01/2019	ELECTRIC CAUTRY	36	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	20	G4P3L3A1	16 years	Regular	3 Days	24-28 Days	Normal
47	55210012019	10/01/2019	ELECTRIC CAUTRY	34	Rural	Muslim	Married	Housewife	Primary	Lower Middle	Barrier	25	G3P3L3A0	14 Years	Regular	2 Days	28-30 Days	Normal
48	26111012019	11/01/2019	ELECTRIC CAUTRY	41	Rural	Muslim	Married	Housewife	Illitrate	Lower Middle	Barrier	26	G3P2L2A1	16 years	Regular	2-3 Days	30 Days	Normal
49	44404012019	12/01/2019	ELECTRIC CAUTRY	40	Rural	Hindu	Married	Housewife	Primary	Lower Middle	None	20	G6P5L5A1	14 years	Regular	4 Days	28 Days	Normal
50	13812012019	12/01/2019	ELECTRIC CAUTRY	26	Rural	Hindu	Married	Housewife	Illitrate	Middle Class	None	26	G1P1L1A0	13 years	Regular	5 Days	24-28 Days	Normal
51	47312012019	12/01/2019	ELECTRIC CAUTRY	32	Rural	Hindu	Married	Housewife	Illitrate	Lower class	TL	18	G2P2L2A0	13 years	Regular	4-5 Days	28-30 Days	Normal
52	413012019	13/01/2019	ELECTRIC CAUTRY	30	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	22	G2P2L2A0	13 years	Regular	3 Days	45-60 Days	Normal
53	15615012019	15/01/2019	ELECTRIC CAUTRY	36	Urban	Hindu	Married	Housewife	High School	Middle Class	Barrier	29	G4P3L3A1	11 Years	Regular	3-4 Days	28 Days	Normal
54	36915012019	15/01/2019	ELECTRIC CAUTRY	38	Rural	Muslim	Married	Housewife	Primary	Lower class	TL	19	G4P3L3A1	15 Years	Regular	2-3 Days	30 Days	Normal
55	28916012019	16/01/2019	ELECTRIC CAUTRY	28	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	23	G2P2L2A0	14 Years	Regular	2 Days	26-34 Days	Normal
56	29717012019	17/01/2019	ELECTRIC CAUTRY	39	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	20	G3P3L3A0	16 years	Regular	3 Days	30 Days	Normal
57	34417012019	17/01/2019	ELECTRIC CAUTRY	26	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	25	G4P2L2A2	15 Years	Regular	4 Days	30 Days	Normal
58	29717012019	17/01/2019	ELECTRIC CAUTRY	40	Urban	Hindu	Married	Housewife	High School	Middle Class	Barrier	30	G8P3L3A5	15 Years	Regular	7 Days	30 Days	Normal
59	23617012019	17/01/2019	ELECTRIC CAUTRY	26	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	20	G2P2L2A0	15 Years	Regular	7 Days	25-26 Days	Normal
60	1618012019	18/01/2019	ELECTRIC CAUTRY	35	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	20	G3P3L2A0	15 years	Regular	6-7 Days	25-28 Days	Normal
61	18719012019	19/01/2019	ELECTRIC CAUTRY	30	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	24	G3P3L3A0	16 years	Regular	3 Days	30 Days	Normal
62	49121012019	21/01/2019	ELECTRIC CAUTRY	31	Rural	Hindu	Married	Service	PG	Upper Middle	TL	29	G2P2L2A0	14 years	Regular	2 Days	30 Days	Scanty
63	64221012019	21/01/2019	ELECTRIC CAUTRY	40	Rural	Hindu	Married	Labour	High School	Lower Middle	TL	28	G4P4L4A0	13 Years	Regular	4 Days	20-22 Days	Normal
64	50921012019	21/01/2019	ELECTRIC CAUTRY	36	Rural	Hindu	Married	Housewife	Primary	Lower Middle	None	19	G6P5L5A1	14 Years	Regular	4 Days	28 Days	Normal
65	10122012019	22/01/2019	ELECTRIC CAUTRY	36	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	22	G4P3L3A1	16 Years	Regular	3 Days	24-28 Days	Normal
66	46322012019	22/01/2019	ELECTRIC CAUTRY	33	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	18	G3P3L2A0	15 Years	Regular	6-7 Days	25-28 Days	Normal
67	47623012019	23/01/2019	ELECTRIC CAUTRY	37	Urban	Hindu	Married	Service	UG	Upper Middle	TL	30	G2P2L2A0	13 years	Regular	3-4 Days	24-25 Day	Normal
68	47623012019	23/01/2019	ELECTRIC CAUTRY	33	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	24	G2P2L2A0	14 Years	Regular	2 Days	30 Days	Scanty
69	11524012019	24/01/2019	ELECTRIC CAUTRY	42	Rural	Hindu	Married	Housewife	Intermedia	Lower Middle	Barrier	29	G2P2L2A0	14 Years	Regular	8-9 Days	20-22 Days	Normal
70	37724012019	24/01/2019	ELECTRIC CAUTRY	30	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	25	G3P3L3A0	15 Years	Regular	3 Days	28 Days	Normal
71	52128012019	28/01/2019	ELECTRIC CAUTRY	38	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	18	G3P3L3A0	14 years	Regular	1-2 Days	30 Days	Normal
72	52128012019	28/01/2019	ELECTRIC CAUTRY	38	Urban	Hindu	Married	Housewife	Intermedia	Middle Class	Barrier	28	G3P2L2A1	12 Years	Regular	6 Days	30 Days	Normal
73	16729012019	29/01/2019	ELECTRIC CAUTRY	32	Rural	Hindu	Married	Housewife	High School	Lower Middle	None	25	G3P3L3A0	15 Years	Regular	2 Days	28-30 Days	Normal
74	34229012019	29/01/2019	ELECTRIC CAUTRY	38	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	21	G4P3L3A1	16 Years	Regular	3 Days	24-28 Days	Normal
75	25930012019	30/01/2019	ELECTRIC CAUTRY	34	Rural	Muslim	Married	Housewife	Primary	Lower Middle	None	22	G4P4L4A0	13 Years	Regular	6 Days	38-30 Days	Normal
76	12101022019	01/02/2019	ELECTRIC CAUTRY	35	Urban	Hindu	Married	Service	UG	Middle Class	Barrier	26	G7P3L3A4	15 Years	Regular	6 Days	30 Days	Normal
77	33701022019	01/02/2019	ELECTRIC CAUTRY	42	Rural	Muslim	Married	Housewife	High School	Middle Class	None	24	G3P3L3A0	13 Years	Regular	5 Days	28-32 Days	Normal
78	35101022019	01/02/2019	ELECTRIC CAUTRY	24	Rural	Hindu	Married	Housewife	Illitrate	Lower class	TL	20	G2P1L1A1	13 Years	Regular	4-5 Days	28-30 Days	Normal

79	2803022019	03/02/2019	<i>ELECTRIC CAUTRY</i>	32	Rural	Hindu	Married	Housewife	Intermedia	Lower Middle	None	23	G2P2L2A0	14 Years	Regular	3 Days	30 Days	Normal
80	45304022019	04/02/2019	<i>ELECTRIC CAUTRY</i>	38	Urban	Muslim	Married	Housewife	High School	Middle Class	None	21	G3P3L3A0	13 years	Regular	5 Days	28-32 DAY	Normal
81	30604022019	04/02/2019	<i>ELECTRIC CAUTRY</i>	40	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	20	G2P2L2A0	15 years	Regular	7 Days	25-26 Days	Normal
82	59204022019	04/02/2019	<i>ELECTRIC CAUTRY</i>	27	Rural	Hindu	Married	Housewife	Primary	Lower Middle	None	26	G2P2L2A0	13 years	Regular	4 Days	26-28 Days	Normal
83	59204022019	04/02/2019	<i>ELECTRIC CAUTRY</i>	25	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	28	G2P2L2A0	13 years	Regular	3 Days	45-60 Days	Normal
84	18505022019	05/02/2019	<i>ELECTRIC CAUTRY</i>	34	Rural	Hindu	Married	Labour	High Schoo	Lower Middle	TL	22	G4P4L4A0	13 years	Regular	4 Days	20-22 Days	Normal
85	2907022019	07/02/2019	<i>ELECTRIC CAUTRY</i>	41	Rural	Muslim	Married	Housewife	Primary	Lower Middle	Barrier	26	G4P4L4A0	15 years	Regular	3-4 Days	30 Days	Normal
86	21408022019	08/02/2019	<i>ELECTRIC CAUTRY</i>	32	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	29	G4P2L3A2	16 years	Regular	3 Days	24-28 Days	Normal
87	24709022019	09/02/2019	<i>ELECTRIC CAUTRY</i>	27	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	19	G2P2L2A0	15 years	Regular	5-6 Days	28-30 Days	Normal
88	22311022019	11/02/2019	<i>ELECTRIC CAUTRY</i>	31	Rural	Hindu	Married	Housewife	Illitrate	Lower class	TL	25	G4P4L4A0	16 years	Regular	4 Days	28-32 Days	Normal
89	51811022019	11/02/2019	<i>ELECTRIC CAUTRY</i>	28	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	28	G2P2L2A0	14 years	Regular	4 Days	30 Days	Normal
90	26212022019	12/02/2019	<i>ELECTRIC CAUTRY</i>	35	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	23	G3P3L3A0	15 years	Regular	3 Days	28 Days	Normal
91	38512022019	12/02/2019	<i>ELECTRIC CAUTRY</i>	30	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	26	G3P3L3A0	14 years	Regular	5 Days	35-40 Days	Normal
92	31913022019	13/02/2019	<i>ELECTRIC CAUTRY</i>	25	Rural	Muslim	Married	Housewife	Primary	Lower Middle	Barrier	25	G3P3L3A0	14 years	Regular	2 Days	28-30 Days	Normal
93	60614022019	14/02/2019	<i>ELECTRIC CAUTRY</i>	42	Urban	Hindu	Married	Housewife	Intermedia	Middle Class	TL	23	G3P2L2A1	13 years	Regular	4 Days	28 Days	Normal
94	11115022019	15/02/2019	<i>ELECTRIC CAUTRY</i>	32	Rural	Hindu	Married	Housewife	Primary	Lower Middle	TL	28	G2P2L2A0	15 years	Regular	7 Days	25-26 Days	Normal
95	29515022019	15/02/2019	<i>ELECTRIC CAUTRY</i>	30	Rural	Hindu	Married	Labour	High Schoo	Lower Middle	TL	24	G4P4L4A0	13 years	Regular	4 Days	20-22 Days	Normal
96	14318022019	18/02/2019	<i>ELECTRIC CAUTRY</i>	40	Rural	Hindu	Married	Housewife	Primary	Lower Middle	None	27	G6P5L5A1	14 years	Regular	4 Days	28 Days	Normal
97	48718022019	18/02/2019	<i>ELECTRIC CAUTRY</i>	40	Rural	Hindu	Married	Labour	Illitrate	Lower class	None	22	G2P2L2A0	14 years	Regular	3-4 Days	25-30 Days	Normal
98	60018022019	18/02/2019	<i>ELECTRIC CAUTRY</i>	38	Rural	Muslim	Married	Housewife	Illitrate	Lower class	TL	21	G4P4L4A0	11 years	Regular	5-6 Days	25-30 Days	Normal
99	23825022019	25/02/2019	<i>ELECTRIC CAUTRY</i>	25	Rural	Muslim	Married	Housewife	Illitrate	Lower Middle	TL	26	G4P4L4A0	15 years	Regular	3-4 Days	30 Days	Normal
100	62825022019	25/02/2019	<i>ELECTRIC CAUTRY</i>	25	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	22	G3P2L2A1	13 years	Regular	4 Days	28 Days	Normal

	Duration Present illnes	Family History	Prakriti	P/S Examination									P/V Examination of Cervix			
L.M.P.			Sharirika Prakriti	Vaginal Discharge				Cervix					Position	Consiste ncy	Mobility	Tenderness
				Amount	Colour	Consiste ncy	Foul smell	Size	Shape	Extent of erosion	Any AbNormal growth	Nabothian Cyst				
20/01/2016	3 years	NS	VP	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
05/03/2017	10 years	NS	PK	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
17/04/2017	6-7 Months	NS	VP	Profuse	White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
22/08/2017	1.5 years	NS	PK	Normal	White	Normal	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
28/09/2017	11 Years	NS	KV	Profuse	Curdy White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
06/12/2017	1 years	NS	VP	Profuse	Curdy White	Thick	Absent	Hypertrophoid	Normal	Around OS	Absent	Present	Mid Position	Firm	Freely Mobile	Tender
30/12/2017	2-3 Years	NS	VP	Normal	White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Tender
01/01/2018	3 Years	NS	PK	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
13/01/2019	6 Years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
10/02/2019	2 years	NS	VP	Profuse	White	Watery	Absent	Hypertrophoid	Parous	Around OS	Absent	Absent	Downward	Firm	Freely Mobile	Tender
20/02/2018	2 years	NS	PK	Profuse	White	Normal	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present	Downward	Firm	Fixed	Tender
02/03/2018	3Years	NS	KV	Normal	Curdy White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present	upward	Firm	Fixed	Non Tender
10/03/2018	5 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Normal	Whole Cervix	Absent	Present	Downward	Firm	Freely Mobile	Non Tender
18/04/2018	2-3 years	NS	KV	Normal	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
30/04/2018	2 Months	NS	VP	Normal	Curdy White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
07/06/2018	1 years	NS	KV	Normal	Curdy White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Non Tender
03/06/2018	6 months	NS	VP	Profuse	White	Watery	Absent	Hypertrophoid	Normal	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Non Tender
01/07/2018	16 Years	NS	PK	Normal	Curdy White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Tender
24/08/2018	2 Years	NS	VP	Profuse	White	Watery	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
14/09/2018	5 Months	NS	KV	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Upper Lip	Absent	Present	Downward	Firm	Freely Mobile	Non Tender
04/10/2018	14 year	NS	VP	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Non Tender
08/12/2018	1 Years	NS	VP	Profuse	White	Thick	Absent	Hypertrophoid	Normal	Lower Lip	Absent	Present	Downward	Firm	Fixed	Tender
13/12/2018	6 Years	NS	KV	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
10/12/2018	6 Months	NS	VP	Normal	White	Normal	Absent	Normal	Parous	Upper Lip	Absent	Present	Downward	Firm	Fixed	Non Tender
14/12/2018	2 Months	NS	PK	Normal	Curdy White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Non Tender
18/12/2018	14 year	NS	VP	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
22/12/2018	1 Years	NS	KV	Normal	Curdy White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
20/12/2018	2 Years	NS	PK	Profuse	White	Thick	Absent	Hypertrophoid	Normal	Whole Cervix	Absent	Present	Downward	Firm	Freely Mobile	Non Tender
27/12/2018	1 Years	NS	KV	Normal	Curdy White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Non Tender
29/12/2018	2 Years	NS	VP	Profuse	White	Watery	Present	Normal	Normal	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
30/12/2018	2 Years	NS	VP	Profuse	White	Normal	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Tender
29/12/2018	5 Years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
28/01/2019	1 Years	NS	KV	Profuse	Curdy White	Thick	Absent	Hypertrophoid	Normal	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
31/12/2018	30/05/2018	NS	VP	Profuse	White	Watery	Absent	Hypertrophoid	Normal	Whole Cervix	Absent	Present	Mid Position	Firm	Freely Mobile	Tender
31/12/2018	1.5 Years	NS	VP	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Tender
01/01/2019	2 Years	NS	PK	Profuse	White	Normal	Present	Hypertrophoid	Parous	Around OS	Absent	Absent	Downward	Firm	Freely Mobile	Tender

02/01/2019	16 years	NS	VP	Normal	Curdy White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
22/12/2018	5 Years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Normal	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
04/01/2019	5 Months	NS	KV	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Freely Mobile	Non Tender
04/01/2019	1 years	NS	PK	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
04--01-2019	6 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Freely Mobile	Non Tender
05/01/2019	1.5 years	NS	PK	Normal	White	Normal	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
04/01/2019	4 Months	NS	PK	Profuse	White	Thick	Absent	Hypertrophoid	Normal	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
06/01/2019	3 years	NS	PK	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present	upward	Firm	Fixed	Non Tender
04/01/2019	2 years	NS	VP	Profuse	White	Normal	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
06/01/2019	2 years	NS	VP	Profuse	White	Watery	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
06/01/2019	1.5 Years	NS	PK	Normal	White	Normal	Present	Normal	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Non Tender
07/01/2019	5 Months	NS	KV	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
05/01/2019	1.5 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present	Downward	Firm	Fixed	Non Tender
06/01/2019	5.6 years	NS	VP	Profuse	White	Thick	Absent	Normal	Parous	Upper Lip	Absent	Absent	Downward	Firm	Fixed	Non Tender
06/01/2019	7 years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
07/01/2019	2-3 years	NS	VP	Normal	White	Normal	Absent	Hypertrophoid	Parous	Lower Lip	Absent	Present	Downward	Firm	Fixed	Tender
11/01/2019	3 Years	NS	PK	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
11/01/2019	2-3 Years	NS	VP	Normal	White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Upward	Firm	Freely Mobile	Non Tender
13/01/2019	1.5 Years	NS	PK	Normal	White	Normal	Absent	Normal	Parous	Whole Cervix	Absent	Present	Downward	Firm	Freely Mobile	Non Tender
13/01/2019	9 Months	NS	KV	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Non Tender
12/01/2019	1 Years	NS	VP	Profuse	Curdy White	Thick	Absent	Hypertrophoid	Normal	Around OS	Absent	Present	Mid Position	Firm	Freely Mobile	Tender
09/01/2019	1 Years	NS	PK	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Lower Lip	Present	Absent	Downward	Firm	Fixed	Tender
10/01/2019	10-15 Years	NS	VP	Normal	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
10/01/2019	2.5 years	NS	KV	Profuse	White	Watery	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Tender
14/01/2019	5 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Upward	Firm	Freely Mobile	Non Tender
18/01/2019	9 Months	NS	VP	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Present	Absent	Downward	Firm	Fixed	Tender
16/01/2019	2 Years	NS	PK	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Tender
16/01/2019	1.5 Years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Absent	Downward	Firm	Fixed	Non Tender
18/01/2019	2 Months	NS	KV	Normal	Curdy White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
15/01/2019	2.5 Years	NS	VP	Profuse	White	Watery	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Freely Mobile	Non Tender
18/01/2019	7 years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Freely Mobile	Non Tender
20/01/2019	5 Months	NS	KV	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Mid Position	Firm	Freely Mobile	Tender
14/01/2019	6 Months	NS	KV	Profuse	White	Watery	Absent	Normal	Parous	Around OS	Absent	Absent	Downward	Firm	Freely Mobile	Tender
20/01/2019	1 Years	NS	PK	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Tender
22/01/2019	4 Months	NS	PK	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
22/01/2019	1 Years	NS	VP	Profuse	Curdy White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
25/01/2019	1 Years	NS	KV	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Non Tender
25/01/2019	2 Years	NS	VP	Profuse	White	Watery	Present	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
24/01/2019	6 Months	NS	VP	Normal	White	Normal	Absent	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Tender
26/01/2019	1 Years	NS	PK	Normal	White	Thick	Absent	Hypertrophoid	Parous	Lower Lip	Absent	Present	Downward	Firm	Fixed	Tender
27/01/2019	10 Years	NS	VP	Profuse	White	Watery	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
27/01/2019	7 Years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Normal	Upper Lip	Absent	Present	Downward	Firm	Freely Mobile	Non Tender

29/01/2019	3 Years	NS	PK	Profuse	White	Watery	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Non Tender
29/01/2019	10 years	NS	KV	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
27/01/2019	1 years	NS	VP	Profuse	Curdy White	Thick	Absent	Hypertrophoid	Parous	Around OS	Absent	Present	Downward	Firm	Fixed	Non Tender
30/01/2019	1 years	NS	VP	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Around OS	Absent	Present	Mid Position	Firm	Freely Mobile	Tender
29/01/2019	2-3 years	NS	KV	Normal	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
01/02/2019	2 years	NS	VP	Profuse	White	Normal	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Tender
02/02/2019	1.5 years	NS	PK	Normal	White	Normal	Absent	Normal	Parous	Upper Lip	Absent	Absent	Downward	Firm	Fixed	Non Tender
03/02/2019	2-3 years	NS	KV	Normal	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
02/02/2019	1 years	NS	KV	Normal	Curdy White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
06/02/2019	6 Months	NS	PK	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Tender
05/02/2019	9 Months	NS	VP	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Tender
07/02/2019	2 Months	NS	VP	Normal	Curdy White	Normal	Absent	Hypertrophoid	Parous	Upper Lip	Absent	Present	Downward	Firm	Fixed	Non Tender
06/02/2019	3 years	NS	KV	Profuse	White	Thick	Present	Normal	Parous	Lower Lip	Absent	Absent	Downward	Firm	Fixed	Tender
09/02/2019	10 years	NS	VP	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Tender
09/02/2019	1 years	NS	VP	Profuse	Curdy White	Thick	Absent	Hypertrophoid	Parous	Around Os	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
06/02/2019	2 years	NS	KV	Profuse	White	Normal	Absent	Hypertrophoid	Normal	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
10/02/2019	5 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Around Os	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
13/02/2019	1 years	NS	KV	Normal	Curdy White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
13/02/2019	6 years	NS	KV	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Freely Mobile	Non Tender
12/02/2019	2 Months	NS	VP	Normal	Curdy White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present	Downward	Firm	Fixed	Non Tender
06/01/2019	16 years	NS	VP	Normal	Curdy White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent	Downward	Firm	Fixed	Tender
22/02/2019	3 years	NS	KV	Profuse	White	Thick	Present	Normal	Parous	Lower Lip	Absent	Absent	Downward	Firm	Fixed	Tender

Vaginal PH	Amount of Discharge		Low Backache		Dysperunia		Pruritus vulvae		Postcoital bleeding		Extent of Erosion	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
6	2	1	0	0	0	0	2	0	0	0	2	0
6.7	3	1	2	1	2	1	0	0	0	0	3	0
6.4	3	0	0	0	0	0	0	0	0	0	3	1
6.5	2	1	0	0	0	0	0	0	0	0	2	0
6.7	1	0	2	1	1	1	0	0	0	0	3	1
6.5	2	1	2	1	2	0	2	0	0	0	3	0
9	3	0	2	1	1	0	1	0	0	0	3	0
7	3	0	3	1	2	1	0	0	0	0	2	0
6	3	1	2	0	2	0	2	0	0	0	3	0
6.5	3	1	2	1	3	0	1	0	2	0	2	0
6.5	3	0	3	1	2	0	2	0	1	0	3	0
6.5	1	0	2	1	0	0	1	0	0	0	2	1
6.5	2	0	2	1	2	0	2	0	0	0	1	0
6.5	2	1	2	1	2	1	0	0	0	0	2	0
6.7	1	0	3	1	1	0	0	0	0	0	2	0
6.3	2	0	3	1	0	0	0	0	0	0	3	1
6.7	3	0	2	1	2	1	1	1	0	0	3	1
6.2	3	0	1	0	2	0	0	0	0	0	2	1
7	3	0	1	0	2	0	1	0	0	0	3	0
6	2	0	1	0	0	0	0	0	0	0	3	1
6.7	2	1	2	0	2	0	1	0	0	0	2	0
6	2	0	1	1	2	1	0	0	0	0	3	0
6.4	3	0	2	1	2	1	1	1	0	0	2	1
6.5	1	0	1	0	0	0	0	0	0	0	2	0
6.9	3	1	2	1	3	0	1	0	2	0	2	0
6.7	3	0	3	1	2	1	0	0	0	0	3	1
6.9	3	1	2	0	2	0	2	0	0	0	3	1
6	3	1	1	1	0	0	0	0	0	0	3	1
6.3	2	0	3	1	0	0	0	0	0	0	2	0
6.3	2	1	3	2	1	0	1	0	0	0	3	1
6.5	2	1	2	1	2	0	2	0	0	0	2	0
6.7	3	0	3	1	2	0	2	0	1	0	3	1
6	2	1	0	0	0	0	0	0	0	0	3	1
6.7	2	1	2	1	2	1	0	0	0	0	3	1
6	3	1	3	1	2	0	1	0	1	0	3	1
6	3	0	2	0	3	1	0	0	0	0	3	1

6.4	3	1	3	1	2	0	1	0	1	0	3	0
6.5	2	0	3	1	0	0	0	0	0	0	3	1
6	2	1	0	0	0	0	2	0	0	0	1	0
6.7	2	1	3	2	1	0	1	0	0	0	3	0
6.9	2	1	2	1	2	0	2	0	0	0	3	0
6.7	2	1	0	0	3	1	2	0	0	0	3	1
6.5	3	0	2	0	3	1	0	0	0	0	2	1
6	2	0	2	1	2	0	2	0	0	0	3	1
6.5	2	0	3	1	0	0	0	0	0	0	3	1
6	3	0	2	1	2	1	1	1	0	0	3	1
6.5	2	1	2	1	2	1	0	0	0	0	3	1
6.5	3	0	3	0	3	0	2	0	0	0	3	1
6.5	3	0	3	1	2	1	0	0	0	0	3	0
6.5	2	0	2	1	2	0	1	0	0	0	3	1
6.7	2	1	0	0	0	0	2	0	0	0	2	0
5.5	2	1	2	1	2	0	2	0	0	0	3	1
6	2	1	0	0	0	0	2	0	0	0	2	0
6.7		0	2	0	3	1	0	0	0	0	3	0
6.5	2	1	0	0	0	0	0	0	0	0	3	1
6.8	2	0	2	1	2	0	1	0	0	0	3	0
6.5	2	1	2	1	2	0	2	0	0	0	3	0
6	2	1	0	0	3	1	2	0	0	0	3	1
6	2	0	2	1	2	0	1	0	0	0	3	0
6	3	0	3	0	3	0	2	0	0	0	3	1
5.6	2	1	0	0	3	1	2	0	0	0	3	1
6.4	2	0	3	1	0	0	1	1	0	0	3	1
7	3	0	3	0	3	0	2	0	0	0	3	1
6.5	3	0	3	1	2	1	0	0	0	0	2	0
6	2	0	3	1	0	0	1	1	0	0	3	0
6.5	2	1	0	0	0	0	0	0	0	0	3	0
6.5	3	0	3	0	3	0	2	0	0	0	3	0
6.7	2	1	2	1	2	0	2	0	0	0	2	1
7	2	1	0	0	3	1	2	0	0	0	3	1
6.5	3	0	2	0	3	1	0	0	0	0	3	1
6	2	0	3	1	0	0	1	1	0	0	3	1
6.5	3	0	2	1	2	1	1	1	0	0	3	1
6.7	3	0	3	0	3	0	2	0	0	0	3	1
6	2	0	2	1	2	0	1	0	0	0	3	1
6.4	2	1	0	0	3	1	2	0	0	0	3	0
6.5	3	1	2	0	2	0	2	0	0	0	3	1
5.6	3	0	3	1	2	0	2	0	1	0	3	0
6.5	3	1	2	0	2	0	2	0	0	0	3	1

6.7	2	1	3	2	1	0	1	0	0	0	3	0
6	3	1	2	1	3	0	1	0	2	0	3	0
6.4	3	1	2	1	2	1	0	0	0	0	1	0
6.5	2	1	3	2	1	0	1	0	0	0	3	1
6	2	0	2	1	2	0	2	0	0	0	3	1
6.5	2	0	1	1	2	1	0	0	0	0	3	0
6	3	1	3	1	2	0	1	0	1	0	3	0
6	3	0	3	1	2	0	2	0	1	0	3	0
6.5	3	0	2	0	3	1	0	0	0	0	2	1
6.7	2	1	2	1	2	1	0	0	0	0	3	1
7.8	3	1	3	1	2	0	1	0	1	0	3	1
6.7	3	0	3	0	3	0	2	0	0	0	3	1
6.9	3	0	3	1	2	1	0	0	0	0	3	1
6.7	3	0	2	1	2	1	1	1	0	0	3	1
6	3	0	3	1	2	1	0	0	0	0	2	0
7	2	1	0	0	3	1	2	0	0	0	3	1
6.3	3	1	2	0	2	0	2	0	0	0	3	1
6.7	2	1	2	1	2	1	0	0	0	0	3	1
6.8	3	0	3	1	2	1	0	0	0	0	2	0
6.7	3	0	3	1	2	0	2	0	1	0	3	1
6	3	0	2	0	3	1	0	0	0	0	3	0
6.9	3	0	3	1	2	1	0	0	0	0	3	1

MASTER CHART OF GROUP B

S.No.	OPD/IPD Regd. No.	Date of Regd.	Procedures	Age (Years)	Habitat	Religion	Marital status	Occupation	Educational Status	Socio economics status	Contraceptive History	Age of Marriage (Yr.)	Parity	Menstru		
														Age of menarche	Regularity	Duration of the cycle
1	12403122016	03/12/2016	Ksharkarma	32	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	26	G3P3L3A0	16 Years	Regular	3-4 days
2	14511032017	11/03/2017	Ksharkarma	37	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	24	G4P3L3A1	16 Years	Regular	1-2 Days
3	25819062017	19/06/2017	Ksharkarma	33	Rural	Hindu	Married	Housewife	Illitrate	Lower Class	TL	20	G3P3L2A0	15 Years	Regular	5-6 Days
4	12128062017	01/09/2017	Ksharkarma	32	Rural	Hindu	Married	labour	UG	Lower Middle	None	23	G2P2L2A0	14 Years	Regular	3-4 days
5	11710112017	24/11/2017	Ksharkarma	30	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	22	G2P2L2A0	14 Years	Regular	3-4 days
6	35021112017	13/12/2017	Ksharkarma	40	Rural	Muslim	Married	Housewife	Primary School	Lower Middle	None	25	G4P4L4A0	13 years	Regular	5-6 Days
7	20805012018	05/01/2018	Ksharkarma	26	Urban	Muslim	Married	Housewife	UG	Middle Class	Barrier	22	G2P2L2A0	14 Years	Regular	1-2 Days
8	31708012018	08/01/2018	Ksharkarma	30	Rural	Muslim	Married	labour	Illitrate	Lower Class	TL	19	G4P4L4A0	11 years	Regular	5-6 Days
9	2124012018	22/01/2018	Ksharkarma	40	Rural	Hindu	Married	Housewife	High School	Lower Middle	None	23	G2P2L2A0	13 years	Regular	5-6 Days
10	25927022018	25/02/2018	Ksharkarma	35	Urban	Hindu	Married	Housewife	High School	Middle Class	Barrier	22	G8P3L3A5	15 years	Regular	>7 Days
11	13816022018	07/03/2018	Ksharkarma	33	Rural	Muslim	Married	Housewife	Primary School	Lower Class	TL	20	G4P3L3A1	15 years	Regular	1-2 Days
12	2814032018	14/03/2018	Ksharkarma	28	Urban	Muslim	Married	Housewife	PG	Lower Middle	None	32	G3P3L3A0	13 years	Regular	5-6 Days
13	2906042018	06/04/2018	Ksharkarma	35	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	Barrier	21	G2P2L2A0	14 Years	Regular	>7 Days
14	26320032018	03/05/2018	Ksharkarma	27	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	22	G2P2L2A0	14 Years	Regular	3-4 days
15	17009052017	09/05/2018	Ksharkarma	30	Urban	Muslim	Married	Service	UG	Upper Middle	Barrier	22	G2P2L2A0	14 years	Regular	3-4 days
16	43113062018	13/06/2018	Ksharkarma	42	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	25	G2P2L2A0	15 years	Regular	1-2 Days
17	49118062018	18/06/2018	Ksharkarma	44	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	None	21	G2P2L2A0	13 years	Regular	3-4 days
18	14120062018	20/08/2018	Ksharkarma	30	Rural	Hindu	Married	Housewife	UG	Lower Middle	TL	26	G3P3L3A0	14 Years	Regular	5-6 Days
19	44304092018	19/09/2018	Ksharkarma	34	Rural	Hindu	Married	Labour	High School	Lower Middle	TL	23	G4P4L4A0	13 years	Regular	1-2 Days
20	8903102018	03/10/2018	Ksharkarma	28	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	22	G2P2L2A0	13 years	Regular	3-4 days
21	38622082017	01/11/2018	Ksharkarma	30	Rural	Muslim	Married	Housewife	Illitrate	Lower Middle	Barrier	22	G2P2L2A1	16 years	Regular	3-4 days
22	30017122018	17/12/2018	Ksharkarma	30	Rural	Muslim	Married	Housewife	High School	Lower Middle	Barrier	26	G2P2L2A0	15 Years	Regular	3-4 days
23	11717122018	17/12/2018	Ksharkarma	30	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	21	G2P2L2A2	15 Years	Regular	5-6 Days
24	14018122018	18/12/2018	Ksharkarma	33	Rural	Muslim	Married	Housewife	Illitrate	Lower Middle	Barrier	21	G2P2L2A1	16 Years	Regular	3-4 days
25	47520122018	19/12/2018	Ksharkarma	25	Rural	Hindu	Married	Housewife	Intermediate	Middle Class	Barrier	22	G3P2L2A1	12 Years	Regular	5-6 Days
26	51924122018	24/12/2018	Ksharkarma	37	Rural	Hindu	Married	labour	UG	Lower Class	TL	20	G2P2L2A0	13 Years	Regular	3-4 days
27	43926122018	26/12/2018	Ksharkarma	28	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	Barrier	26	G3P2L2A1	12 Years	Regular	5-6 Days
28	50229122018	29/12/2018	Ksharkarma	24	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	None	24	G2P2L2A0	14 years	Regular	5-6 Days
29	24931122018	31/12/2018	Ksharkarma	35	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	None	19	G2P2L2A0	13 Years	Regular	5-6 Days
30	9802012019	02/01/2019	Ksharkarma	30	Rural	Muslim	Married	Housewife	Illitrate	Lower Middle	Barrier	25	G2P2L2A1	16 Years	Regular	3-4 days
31	65103012019	03/01/2019	Ksharkarma	37	Rural	Hindu	Married	labour	Primary School	Lower Middle	None	21	G6P5L5A1	14 Years	Regular	1-2 Days
32	36304012019	04/01/2019	Ksharkarma	25	Rural	Muslim	Married	Housewife	High School	Lower Class	None	25	G4P4L4A0	13 years	Regular	5-6 Days
33	13204012019	04/01/2019	Ksharkarma	35	Rural	Muslim	Married	Housewife	Primary School	Lower Middle	Barrier	23	G4P4L4A0	15 Years	Regular	3-4 days
34	36304012019	04/01/2019	Ksharkarma	25	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	TL	26	G3P2L2A1	13 Years	Regular	5-6 Days
35	51905012019	05/01/2019	Ksharkarma	25	Rural	Muslim	Married	Housewife	Illitrate	Lower Middle	Barrier	25	G2P2L2A1	16 Years	Regular	1-2 Days
36	34907012019	07/01/2019	Ksharkarma	42	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	21	G4P3L3A1	16 years	Regular	3-4 days
37	24907012019	07/01/2019	Ksharkarma	35	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	Barrier	22	G2P2L2A0	14 years	Regular	>7 Days
38	18608012019	08/01/2019	Ksharkarma	37	Rural	Hindu	Married	labour	Illitrate	Lower Class	None	18	G2P2L2A0	14 years	Regular	3-4 days
39	33108012019	08/01/2019	Ksharkarma	35	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	24	G2P2L2A0	14 years	Regular	5-6 Days
40	47909012019	09/01/2019	Ksharkarma	32	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	19	G4P4L4A0	12 years	Regular	3-4 days
41	26310012019	10/01/2019	Ksharkarma	30	Rural	Muslim	Married	Housewife	High School	Lower Middle	Barrier	23	G2P2L2A0	15 years	Regular	3-4 days
42	58710012019	10/01/2019	Ksharkarma	36	Rural	Muslim	Married	Housewife	UG	Lower Middle	Barrier	21	G4P4L4A0	15 years	Regular	3-4 days
43	67910012019	10/01/2019	Ksharkarma	37	Rural	Hindu	Married	Housewife	Intermediate	Middle Class	Barrier	30	G3P2L2A1	12 years	Regular	>7 Days
44	68110012019	10/01/2019	Ksharkarma	32	Rural	Hindu	Married	Housewife	High School	Lower Middle	None	22	G3P3L3A0	15 years	Regular	1-2 Days
45	68510012019	10/01/2019	Ksharkarma	29	Urban	Muslim	Married	Service	UG	Upper Middle	Barrier	32	G2P2L2A0	14 years	Regular	3-4 days
46	33810012019	10/01/2019	Ksharkarma	39	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	None	20	G2P2L2A0	13 Years	Regular	3-4 days
47	19311012019	11/01/2019	Ksharkarma	30	Rural	Hindu	Married	Housewife	Illitrate	Lower Middle	TL	25	G2P2L2A0	14 years	Regular	1-2 Days
48	2611012019	11/01/2019	Ksharkarma	42	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	22	G3P3L3A0	14 Years	Regular	5-6 Days
49	13912012019	12/01/2019	Ksharkarma	30	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	24	G2P2L2A2	15 years	Regular	3-4 days
50	46712012019	12/01/2019	Ksharkarma	35	Urban	Hindu	Married	Housewife	UG	Middle Class	Barrier	30	G8P3L3A5	15 years	Regular	>7 Days
51	19012012019	12/01/2019	Ksharkarma	32	Rural	Muslim	Married	Housewife	Primary School	Lower Class	TL	18	G4P3L3A1	15 Years	Regular	3-4 days
52	413012019	13/01/2019	Ksharkarma	30	Rural	Muslim	Married	labour	Illitrate	Lower Class	TL	24	G4P4L4A0	11 years	Regular	5-6 Days
53	10015012019	15/01/2019	Ksharkarma	26	Urban	Muslim	Married	Service	Primary School	Middle Class	Barrier	29	G2P2L2A0	14 Years	Regular	3-4 days
54	6216012019	16/01/2019	Ksharkarma	36	Rural	Hindu	Married	Housewife	UG	Lower Middle	TL	25	G4P3L3A1	16 Years	Regular	3-4 days
55	25116012019	16/01/2019	Ksharkarma	37	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	22	G2P2L2A2	15 Years	Regular	3-4 days

56	18317012019	17/01/2019	Ksharkarma	38	Rural	Muslim	Married	Housewife	High School	Lower Middle	None	24	G4P4L4A0	13 Years	Regular	5-6 Days
57	36417012019	17/01/2019	Ksharkarma	24	Urban	Hindu	Married	Housewife	Illiterate	Middle Class	None	21	G2P2L2A0	13 Years	Regular	5-6 Days
58	54517012019	17/01/2019	Ksharkarma	37	Rural	Hindu	Married	labour	Primary School	Lower Middle	None	24	G2P2L2A0	14 Years	Regular	5-6 Days
59	34417012019	17/01/2019	Ksharkarma	36	Rural	Muslim	Married	Housewife	Illiterate	Lower Class	TL	20	G4P4L4A0	11 Years	Regular	5-6 Days
60	21018012019	18/01/2019	Ksharkarma	28	Urban	Hindu	Married	Service	UG	Upper Middle	TL	21	G2P2L2A0	13 Years	Regular	3-4 days
61	28119012019	19/01/2019	Ksharkarma	35	Rural	Muslim	Married	Housewife	Primary School	Lower Class	None	27	G2P2L2A0	14 Years	Regular	1-2 Days
62	45121012019	21/01/2019	Ksharkarma	33	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	None	23	G2P2L2A0	14 Years	Regular	3-4 days
63	63821012019	21/01/2019	Ksharkarma	29	Rural	Hindu	Married	Housewife	PG	Lower Middle	TL	31	G2P2L2A0	13 Years	Regular	3-4 days
64	49621012019	21/01/2019	Ksharkarma	30	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	25	G3P3L3A0	16 Years	Regular	3-4 days
65	31922012019	22/01/2019	Ksharkarma	37	Rural	Hindu	Married	Housewife	Illiterate	Lower Middle	TL	27	G2P2L3A0	15 Years	Regular	5-6 Days
66	31922012019	22/01/2019	Ksharkarma	37	Urban	Muslim	Married	Service	UG	Upper Middle	Barrier	27	G2P2L2A0	14 Years	Regular	3-4 days
67	21123012019	23/01/2019	Ksharkarma	35	Rural	Hindu	Married	labour	Illiterate	Lower Class	TL	18	G4P4L4A0	16 Years	Regular	3-4 days
68	26423012019	23/01/2019	Ksharkarma	39	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	28	G4P4L4A0	12 Years	Regular	3-4 days
69	38624012019	24/01/2019	Ksharkarma	36	Urban	Hindu	Married	Housewife	High School	Lower Middle	TL	23	G2P2L2A0	14 Years	Regular	3-4 days
70	28325012019	25/01/2019	Ksharkarma	42	Rural	Muslim	Married	Housewife	High School	Lower Middle	Barrier	27	G5P4L3A1D1	15 Years	Regular	3-4 days
71	13128012019	28/01/2019	Ksharkarma	30	Rural	Muslim	Married	Housewife	Primary School	Lower Middle	Barrier	24	G4P4L4A0	15 Years	Regular	3-4 days
72	20129012019	29/01/2019	Ksharkarma	37	Rural	Hindu	Married	Housewife	Intermediate	Middle Class	TL	21	G3P2L2A1	13 Years	Regular	3-4 days
73	21629012019	29/01/2019	Ksharkarma	33	Urban	Hindu	Married	Housewife	High School	Middle Class	Barrier	29	G4P3L3A1	11 Years	Regular	3-4 days
74	54629012019	29/01/2019	Ksharkarma	29	Rural	Hindu	Married	Housewife	Illiterate	Lower Middle	TL	24	G2P2L2A0	14 Years	Regular	3-4 days
75	40430012019	30/01/2019	Ksharkarma	36	Rural	Hindu	Married	Housewife	Illiterate	Middle Class	None	27	G2P2L2A0	13 Years	Regular	5-6 Days
76	8101022019	01/02/2019	Ksharkarma	26	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	None	24	G2P2L2A0	14 Years	Regular	5-6 Days
77	27101022019	01/02/2019	Ksharkarma	39	Rural	Muslim	Married	Housewife	Primary School	Lower Class	None	20	G2P2L2A0	14 Years	Regular	1-2 Days
78	44802022019	02/02/2019	Ksharkarma	43	Rural	Hindu	Married	Housewife	Illiterate	Lower Middle	TL	23	G3P3L3A0	14 Years	Regular	1-2 Days
79	44704022019	04/02/2019	Ksharkarma	24	Rural	Muslim	Married	Housewife	Primary School	Lower Class	TL	20	G4P3L3A1	15 years	Regular	3-4 days
80	36704022019	04/02/2019	Ksharkarma	30	Rural	Muslim	Married	Housewife	Primary School	Lower Class	None	25	G2P2L2A0	14 years	Regular	1-2 Days
81	56504022019	04/02/2019	Ksharkarma	30	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	None	22	G2P2L2A0	14 years	Regular	3-4 days
82	14804022019	04/02/2019	Ksharkarma	35	Urban	Hindu	Married	Housewife	High School	Lower Middle	TL	28	G2P2L2A0	14 years	Regular	1-2 Days
83	14804022019	04/02/2019	Ksharkarma	35	Rural	Hindu	Married	Housewife	Illiterate	Lower Middle	TL	24	G2P2L3A0	15 years	Regular	5-6 Days
84	42107022019	07/02/2019	Ksharkarma	35	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	None	27	G6P5L5A1	14 years	Regular	3-4 days
85	50307022019	07/02/2019	Ksharkarma	28	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	None	24	G2P2L2A0	13 years	Regular	3-4 days
86	5108022019	08/02/2019	Ksharkarma	26	Rural	Hindu	Married	labour	Illiterate	Lower Middle	TL	22	G3P3L3A0	14 years	Regular	1-2 Days
87	37409022019	09/02/2019	Ksharkarma	28	Rural	Hindu	Married	Housewife	Illiterate	Lower Middle	TL	24	G3P3L2A0	15 years	Regular	3-4 days
88	43111022019	11/02/2019	Ksharkarma	26	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	Barrier	28	G2P2L2A0	14 years	Regular	>7 Days
89	22411022019	11/02/2019	Ksharkarma	26	Rural	Hindu	Married	Housewife	Primary School	Lower Middle	TL	23	G3P3L3A0	16 years	Regular	3-4 days
90	28712022019	12/02/2019	Ksharkarma	27	Rural	Hindu	Married	Housewife	Primary School	Upper Middle	TL	21	G4P4L4A0	12 years	Regular	3-4 days
91	18013022019	13/02/2019	Ksharkarma	30	Rural	Muslim	Married	Housewife	High School	Lower Middle	Barrier	27	G2P2L2A0	15 years	Regular	3-4 days
92	53514022019	14/02/2019	Ksharkarma	31	Rural	Hindu	Married	Housewife	Intermediate	Middle Class	Barrier	29	G3P2L2A1	12 years	Regular	5-6 Days
93	1415022019	15/02/2019	Ksharkarma	34	Rural	Hindu	Married	labour	High School	Lower Middle	None	24	G3P3L3A0	15 years	Regular	3-4 days
94	15315022019	15/02/2019	Ksharkarma	30	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	None	21	G2P2L2A0	14 years	Regular	3-4 days
95	23416022019	16/02/2019	Ksharkarma	30	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	22	G3P2L2A1	12 years	Regular	5-6 Days
96	22518022019	18/02/2019	Ksharkarma	28	Rural	Hindu	Married	Housewife	High School	Lower Middle	TL	23	G4P3L3A1	16 years	Regular	3-4 days
97	49118022019	18/02/2019	Ksharkarma	35	Rural	Hindu	Married	Housewife	Illiterate	Lower Class	TL	28	G4P4L4A0	16 years	Regular	3-4 days
98	4119022019	19/02/2019	Ksharkarma	41	Rural	Hindu	Married	labour	Illiterate	Lower Class	None	25	G2P2L2A0	14 years	Regular	3-4 days
99	32925022019	25/02/2019	Ksharkarma	26	Rural	Muslim	Married	Housewife	Illiterate	Lower Middle	None	21	G2P2L2A0	13 years	Regular	3-4 days
100	53225022019	25/02/2019	Ksharkarma	35	Rural	Hindu	Married	Housewife	Intermediate	Lower Middle	None	27	G3P3L3A0	15 years	Regular	3-4 days

Menstrual History			Duration Present illness	Family History	Prakriti	P/S Examination								
Length of the Cycle	Amount of Bleeding	L.M.P.				Sharirika Prakriti	Vaginal Discharge				Cervix			
					Amount		Colour	Consistency	Foul smell	Size	Shape	Extent of erosion	Any AbNormal growth	Nabothian Cyst
30 Days	Normal	27/11/2016	4 Years	NS	VP	Profuse	White	Thick	Absent	Normal	Parous	whole cervix	Absent	Absent
24-28 Days	Normal	06/03/2017	10 Years	NS	VP	Profuse	White	Watery	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present
25-28 Days	Normal	15/06/2017	2-3 Years	NS	KV	Normal	White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
25-30 Days	Normal	27/08/2017	1 Month	NS	PK	Normal	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Present
30 Days	Scanty	17/11/2017	10 Month	NS	KV	Profuse	Curdy White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present
28-30 Days	Normal	02/12/2017	4 Months	NS	PK	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present
30 Days	Normal	01/01/2018	9 Months	NS	KV	Normal	White	Thick	Absent	Hypertrophoid	Normal	Around OS	Absent	Absent
25-30 Days	Normal	02/01/2018	6 Months	NS	VP	Normal	White	Normal	Absent	Normal	Parous	whole cervix	Absent	Absent
24-28 Days	Normal	16/01/2018	3 years	NS	PK	Profuse	White	Watery	Present	Normal	Parous	Whole Cervix	Absent	Present
30 Days	Normal	19/02/2018	1 years	NS	KV	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Lower Lip	Absent	Absent
30 Days	Normal	02/03/2018	2-3 years	NS	VP	Normal	White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present
28-32 Days	Normal	27/02/2018	6 years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	whole cervix	Absent	Absent
20-22 Days	Normal	03/04/2018	10 Years	NS	KV	Normal	Curdy White	Thick	Present	Normal	Parous	Around OS	Absent	Present
30 Days	Normal	28/04/2018	9 Months	NS	KV	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	04/05/2017	6 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Around OS	Absent	Present
25-26 Days	Normal	02/06/2018	10-15 years	NS	KV	Normal	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
26-28 Days	Normal	31/05/2018	6 Months	NS	KV	Profuse	White	Thick	Present	Normal	Parous	Lower Lip	Absent	Present
28-30 Days	Normal	11/08/2018	2.5 Years	NS	VP	Profuse	White	Watery	Absent	Hypertrophoid	Parous	whole cervix	Absent	Absent
20-22 Days	Normal	12/09/2018	2 years	NS	VP	Profuse	White	Watery	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present
45-60 Days	Normal	29/09/2018	6 years	NS	KV	Normal	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	28/10/2018	7 years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Around OS	Absent	Present
31-32 Days	Normal	13/12/2018	2-3 Years	NS	KV	Normal	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	13/12/2018	2-3 Years	NS	VP	Normal	White	Normal	Absent	Normal	Normal	Upper Lip	Absent	Present
30 Days	Normal	14/01/2019	7 Years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Around OS	Absent	Present
30 Days	Normal	12/12/2018	6 Months	NS	KV	Profuse	White	Watery	Absent	Normal	Parous	whole cervix	Absent	Absent
28-30 Days	Normal	19/12/2018	2-3 Years	NS	KV	Normal	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present
30 Days	Normal	20/12/2018	6 Months	NS	PK	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	22/12/2018	3 years	NS	KV	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Present
24-28 Days	Normal	27/12/2018	6 Years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Normal	Whole Cervix	Absent	Present
30 Days	Normal	29/12/2018	5 Months	NS	KV	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Around OS	Absent	Present
28 Days	Normal	30/12/2018	6 Years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present
28-30 Days	Normal	28/12/2018	6 Months	NS	VP	Normal	White	Normal	Absent	Normal	Normal	whole cervix	Absent	Absent
30 Days	Normal	31/12/2018	10-15 Years	NS	KV	Normal	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
28 Days	Normal	31/12/2018	2 Years	NS	VP	Profuse	White	Watery	Present	Hypertrophoid	Parous	Around OS	Absent	Absent
30 Days	Normal	01/01/2019	1 Years	NS	VP	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present
24-28 Days	Normal	03/01/2019	2 Months	NS	KV	Normal	Curdy White	Normal	Absent	Hypertrophoid	Parous	Lower Lip	Absent	Absent
20-22 Days	Normal	02/01/2019	6 Months	NS	KV	Profuse	White	Watery	Absent	Normal	Parous	Whole Cervix	Absent	Absent
25-30 Days	Normal	02/01/2019	2 years	NS	VP	Profuse	White	Watery	Present	Normal	Parous	Upper Lip	Absent	Absent
30 Days	Normal	03/01/2019	5.6 years	NS	KV	Profuse	White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	03/01/2019	3 years	NS	VP	Profuse	White	Thick	Present	Normal	Normal	whole cervix	Absent	Absent
31-32 Days	Normal	04/01/2019	10 years	NS	KV	Profuse	White	Watery	Present	Hypertrophoid	Parous	whole cervix	Absent	Absent
30 Days	Normal	05/01/2019	7 years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Absent
30 Days	Normal	05/01/2019	1 years	NS	VP	Profuse	Curdy White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
28-30 Days	Normal	04/01/2019	1 years	NS	KV	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Around OS	Absent	Absent
30 Days	Scanty	05/01/2019	2-3 years	NS	VP	Normal	White	Normal	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
26-28 Days	Normal	05/01/2019	6 Months	NS	PK	Profuse	White	Thick	Present	Normal	Parous	Lower Lip	Absent	Absent
26-34 Days	Normal	07/01/2019	14 year	NS	VP	Profuse	White	Thick	Present	Normal	Parous	whole cervix	Absent	Absent
28-30 Days	Normal	06/01/2019	6 Years	NS	KV	Profuse	White	Thick	Present	Hypertrophoid	Parous	whole cervix	Absent	Absent
30 Days	Normal	07/01/2019	6 Months	NS	KV	Profuse	White	Watery	Absent	Normal	Parous	Upper Lip	Absent	Present
30 Days	Normal	05/01/2019	1 years	NS	PK	Normal	White	Thick	Absent	Hypertrophoid	Parous	whole cervix	Absent	Absent
30 Days	Normal	08/01/2019	6 Years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
25-30 Days	Normal	07/01/2019	6 years	NS	KV	Normal	White	Thick	Absent	Hypertrophoid	Parous	Lower Lip	Absent	Absent
30 Days	Normal	11/01/2019	6 Years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Around OS	Absent	Present
24-28 Days	Normal	12/01/2019	10 Years	NS	KV	Profuse	White	Watery	Present	Hypertrophoid	Parous	Upper Lip	Absent	Absent
30 Days	Normal	12/01/2019	6 Months	NS	KV	Profuse	White	Watery	Absent	Normal	Parous	Around OS	Absent	Absent

28-30 Days	Normal	11/01/2019	4 Months	NS	PK	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
24-28 Days	Normal	10/01/2019	3 Years	NS	PK	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	12/01/2019	2 Years	NS	VP	Profuse	White	Normal	Present	Hypertrophoid	Parous	Upper Lip	Absent	Absent
25-30 Days	Normal	11/01/2019	6 Months	NS	VP	Normal	White	Normal	Absent	Normal	Parous	Whole Cervix	Absent	Present
24-25 Days	Normal	14/01/2019	4 Months	NS	PK	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Upper Lip	Absent	Absent
60-90 Days	Normal	16/01/2019	5 Years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	whole cervix	Absent	Absent
30 Days	Normal	17/01/2019	30/05/2018	NS	KV	Profuse	White	Watery	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present
28-30 Days	Normal	17/01/2019	6 Years	NS	KV	Normal	White	Thick	Absent	Hypertrophoid	Normal	Whole Cervix	Absent	Present
30 Days	Normal	18/01/2019	9 Months	NS	VP	Normal	White	Thick	Absent	Hypertrophoid	Parous	whole cervix	Absent	Present
28-30 Days	Normal	15/01/2019	16 Years	NS	KV	Normal	Curdy White	Thick	Absent	Hypertrophoid	Parous	whole cervix	Absent	Absent
30 Days	Normal	17/01/2019	2-3 Years	NS	VP	Normal	White	Normal	Absent	Hypertrophoid	Parous	Around OS	Absent	Present
28-32 Days	Normal	18/01/2019	14 year	NS	KV	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Present
30 Days	Normal	18/01/2019	3 Years	NS	VP	Profuse	White	Thick	Present	Normal	Parous	Around OS	Absent	Present
30 Days	Normal	20/01/2019	5.6 Years	NS	KV	Profuse	White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Absent
31-32 Days	Normal	21/01/2019	10 Years	NS	KV	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
30 Days	Normal	23/01/2019	7 Years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present
28 Days	Normal	24/01/2019	3 Years	NS	PK	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
28 Days	Normal	25/01/2019	2 Years	NS	VP	Profuse	White	Normal	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
26-34 Days	Normal	25/01/2019	14 year	NS	KV	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Absent
24-28 Days	Normal	25/01/2019	5.6 Years	NS	KV	Profuse	White	Thick	Absent	Normal	Parous	Whole Cervix	Absent	Present
30 Days	Normal	27/01/2019	3 Years	NS	VP	Profuse	White	Thick	Present	Normal	Parous	Upper Lip	Absent	Present
28-30 Days	Normal	28/01/2019	1.5 Years	NS	PK	Normal	White	Normal	Present	Normal	Parous	Around OS	Absent	Absent
30 Days	Normal	29/01/2019	4 Months	NS	PK	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present
30 Days	Normal	30/01/2019	6 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
28-30 Days	Normal	31/01/2019	1.5 years	NS	PK	Normal	White	Normal	Present	Normal	Parous	Around OS	Absent	Present
30 Days	Normal	30/01/2019	3 years	NS	PK	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
30 Days	Normal	01/02/2019	2 years	NS	VP	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
28-30 Days	Normal	28/01/2019	6 Months	NS	PK	Profuse	White	Thick	Present	Normal	Parous	Whole Cervix	Absent	Present
28 Days	Normal	01/02/2019	6 years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Absent
26-28 Days	Normal	02/02/2019	6 years	NS	PK	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
30 Days	Normal	02/02/2019	1 years	NS	VP	Profuse	White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
25-28 Days	Normal	01/02/2019	10-15 years	NS	KV	Normal	White	Thick	Present	Hypertrophoid	Parous	Upper Lip	Absent	Present
20-22 Days	Normal	01/02/2019	1.5 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	05/02/2019	10-15 years	NS	VP	Normal	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	06/02/2019	16 years	NS	KV	Normal	Curdy White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present
31-32 Days	Normal	08/02/2019	6 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
30 Days	Normal	07/02/2019	4 Months	NS	PK	Profuse	White	Thick	Absent	Normal	Parous	Around OS	Absent	Absent
28-30 Days	Normal	11/02/2019	3 years	NS	PK	Profuse	White	Watery	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
30 Days	Normal	10/02/2019	2-3 years	NS	VP	Normal	White	Normal	Absent	Hypertrophoid	Normal	Whole Cervix	Absent	Absent
30 Days	Normal	20/02/2019	16 years	NS	KV	Normal	Curdy White	Thick	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
24-28 Days	Normal	12/02/2019	6 Months	NS	VP	Profuse	White	Watery	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Present
28-32 Days	Normal	11/02/2019	1.5 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Present
25-30 Days	Normal	13/02/2019	30/05/2018	NS	VP	Profuse	White	Watery	Absent	Hypertrophoid	Parous	Whole Cervix	Absent	Absent
24-25 Day	Normal	22/02/2019	2 Months	NS	VP	Normal	Curdy White	Normal	Absent	Hypertrophoid	Parous	Upper Lip	Absent	Present
28-30 Days	Normal	21/02/2019	6 years	NS	VP	Profuse	White	Thick	Present	Hypertrophoid	Parous	Whole Cervix	Absent	Absent

P/V Examination of Cervix				Vaginal PH	Amount of Discharge		Low Backache		Dysperunia		Pruritus vulvae		Postcoital bleeding		Extent of Erosion	
Position	Consistency	Mobility	Tenderness		BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
Downward	Firm	Freely Mobile	Non Tender	6.8	2	0	1	0	0	0	0	0	0	0	2	0
Downward	Firm	Freely Mobile	Non Tender	6.7	3	1	2	1	2	1	0	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6	3	0	3	0	2	0	3	1	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6	1	0	2	0	0	0	1	0	0	0	1	0
Mid Position	Firm	Freely Mobile	Tender	6	3	1	1	0	2	1	0	0	0	0	2	0
Downward	Firm	Freely Mobile	Tender	5.5	2	0	1	1	2	1	0	0	0	0	2	0
Downward	Firm	Fixed	Tender	6.7	3	0	3	0	3	0	2	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6.5	2	0	3	1	0	0	1	1	0	0	3	0
Downward	Firm	Freely Mobile	Tender	5.6	3	0	2	1	1	0	1	0	0	0	2	1
Downward	Firm	Fixed	Tender	6	2	1	0	0	3	1	2	0	0	0	3	1
Upward	Firm	Freely Mobile	Non Tender	6.7	3	0	2	0	3	1	0	0	0	0	3	1
Downward	Firm	Freely Mobile	Non Tender	6	3	1	2	0	2	0	2	0	0	0	2	0
Downward	Firm	Freely Mobile	Tender	9	3	1	2	1	2	1	2	0	0	0	3	1
Downward	Firm	Freely Mobile	Non Tender	7.8	2	0	2	1	2	0	1	0	0	0	3	1
Downward	Firm	Freely Mobile	Tender	6.4	2	0	3	1	0	0	1	1	0	0	3	0
Downward	Firm	Fixed	Tender	6	2	0	2	1	2	0	1	0	0	0	3	1
Downward	Firm	Fixed	Tender	6.5	3	1	3	1	2	0	1	0	1	0	3	1
Downward	Firm	Fixed	Non Tender	6.9	2	1	1	1	2	0	1	0	0	0	2	0
Downward	Firm	Fixed	Tender	7	3	0	3	0	3	0	2	0	0	0	3	0
Downward	Firm	Freely Mobile	Tender	6	3	1	2	1	3	0	1	0	2	0	2	0
Downward	Firm	Fixed	Non Tender	6.5	2	1	3	2	1	0	1	0	0	0	2	0
Downward	Firm	Freely Mobile	Non Tender	6.2	3	0	2	0	3	1	0	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6.3	3	1	2	0	2	0	2	0	0	0	3	1
Downward	Firm	Fixed	Non Tender	6.5	2	1	3	2	1	0	1	0	0	0	1	0
Downward	Firm	Fixed	Tender	6.4	3	0	3	0	2	0	1	0	0	0	3	1
Downward	Firm	Freely Mobile	Non Tender	6.5	2	1	2	1	2	1	0	0	0	0	3	0
Upward	Firm	Fixed	Non Tender	6	2	0	3	1	0	0	0	0	0	0	2	1
Downward	Firm	Fixed	Non Tender	6.7	3	1	3	1	2	0	1	0	1	0	1	0
Downward	Firm	Freely Mobile	Non Tender	6	2	1	2	1	0	0	0	0	0	0	3	1
Downward	Firm	Fixed	Non Tender	6	3	1	3	1	2	0	1	0	1	0	2	0
Downward	Firm	Fixed	Non Tender	7.8	2	1	0	0	3	1	2	0	0	0	2	0
Downward	Firm	Fixed	Non Tender	7	3	1	2	1	3	0	1	0	2	0	3	1
Downward	Firm	Freely Mobile	Non Tender	7	2	0	2	1	2	0	2	0	0	0	1	0
Downward	Firm	Freely Mobile	Tender	6.5	2	0	2	1	2	0	1	0	0	0	3	1
Upward	Firm	Fixed	Non Tender	6.7	3	0	3	1	2	0	2	0	1	0	3	1
Downward	Firm	Fixed	Tender	6.7	3	0	2	1	2	1	1	1	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	9	3	1	2	1	2	1	0	0	0	0	3	1
Downward	Firm	Fixed	Non Tender	6	3	1	2	1	3	0	1	0	2	0	3	1
Downward	Firm	Freely Mobile	Non Tender	7.8	2	1	0	0	0	0	0	0	0	0	2	0
Downward	Firm	Freely Mobile	Non Tender	6.2	2	0	1	1	2	1	0	0	0	0	2	0
Downward	Firm	Freely Mobile	Non Tender	6.2	2	0	1	1	2	1	0	0	0	0	2	0
Downward	Firm	Freely Mobile	Non Tender	7	3	0	2	1	1	0	1	0	0	0	2	0
Downward	Firm	Freely Mobile	Non Tender	6	3	0	3	1	2	0	2	0	1	0	2	0
Mid Position	Firm	Freely Mobile	Tender	6.4	3	1	2	0	2	0	2	0	0	0	3	0
Downward	Firm	Freely Mobile	Tender	6.7	2	1	2	1	2	1	0	0	0	0	3	1
Downward	Firm	Fixed	Tender	6.3	2	0	2	1	2	0	1	0	0	0	3	1
Downward	Firm	Fixed	Tender	6.5	3	1	3	1	2	0	1	0	1	0	3	1
Downward	Firm	Fixed	Non Tender	6.7	3	1	3	1	2	0	1	0	1	0	3	1
Downward	Firm	Fixed	Non Tender	6	2	0	2	1	2	0	2	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6	3	0	3	1	2	1	0	0	0	0	3	0
Downward	Firm	Fixed	Tender	6.8	3	0	2	1	2	1	1	1	0	0	3	1
Upward	Firm	Freely Mobile	Non Tender	6.5	2	1	0	0	3	1	2	0	0	0	2	0
Downward	Firm	Fixed	Tender	6.5	2	0	2	1	2	0	1	0	0	0	2	0
Downward	Firm	Freely Mobile	Tender	6.4	2	0	3	1	0	0	1	1	0	0	2	0
Downward	Firm	Freely Mobile	Non Tender	6.7	3	1	2	1	2	1	0	0	0	0	3	0
Mid Position	Firm	Freely Mobile	Tender	6.7	3	0	3	1	2	0	2	0	1	0	1	0

Downward	Firm	Freely Mobile	Tender	5.5	2	0	1	1	2	1	0	0	0	0	3	1
Downward	Firm	Freely Mobile	Tender	5.6	3	0	2	1	1	0	1	0	0	0	2	0
Downward	Firm	Fixed	Tender	6.5	3	0	3	1	2	0	2	0	1	0	2	0
Upward	Firm	Fixed	Non Tender	6.5	3	0	2	1	1	0	1	0	0	0	3	1
Downward	Firm	Fixed	Non Tender	6	2	0	2	1	2	0	1	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6.5	2	0	2	1	2	0	2	0	0	0	2	0
Downward	Firm	Fixed	Non Tender	6.7	3	0	2	1	2	1	1	1	0	0	2	0
Downward	Firm	Freely Mobile	TENDR	6	3	1	2	1	3	0	1	0	2	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6.7	2	1	0	0	0	0	2	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6.5	3	1	2	1	2	1	0	0	0	0	2	0
Downward	Firm	Freely Mobile	Tender	6	3	0	3	1	2	1	0	0	0	0	1	0
Downward	Firm	Freely Mobile	Non Tender	6	2	0	1	1	2	1	0	0	0	0	3	0
Downward	Firm	Fixed	Tender	6.3	3	1	2	0	2	0	2	0	0	0	2	0
Downward	Firm	Freely Mobile	Non Tender	6	3	0	3	1	2	0	2	0	1	0	2	0
Downward	Firm	Fixed	Tender	6.7	2	0	2	1	2	0	2	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	7	2	0	3	1	0	0	0	0	0	0	2	0
Downward	Firm	Fixed	Non Tender	6.8	3	1	3	1	2	0	1	0	1	0	3	1
Downward	Firm	Freely Mobile	Non Tender	6.4	3	1	2	1	3	0	1	0	2	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6.7	3	0	2	1	2	1	1	1	0	0	3	1
Downward	Firm	Freely Mobile	Tender	6.5	3	0	2	0	3	1	0	0	0	0	2	0
Downward	Firm	Fixed	Tender	5.5	2	0	2	1	2	0	2	0	0	0	2	1
Downward	Firm	Freely Mobile	Non Tender	6	3	0	2	0	3	1	0	0	0	0	3	1
Downward	Firm	Fixed	Non Tender	6	2	0	2	1	2	0	2	0	0	0	2	1
Downward	Firm	Fixed	Non Tender	6.4	3	0	3	0	3	0	2	0	0	0	2	0
Downward	Firm	Freely Mobile	Tender	6	3	0	3	1	2	1	0	0	0	0	3	1
Downward	Firm	Freely Mobile	Tender	6.7	2	1	0	0	0	0	0	0	0	0	3	0
Downward	Firm	Fixed	Non Tender	6	2	0	3	1	0	0	0	0	0	0	2	0
Uward	Firm	Fixed	Non Tender	6	3	0	2	1	2	1	1	1	0	0	3	1
Downward	Firm	Fixed	Tender	6.5	3	0	2	1	1	0	1	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6	3	0	2	0	3	1	0	0	0	0	3	1
Downward	Firm	Freely Mobile	Non Tender	6.9	3	0	2	1	1	0	1	0	0	0	3	1
Downward	Firm	Freely Mobile	Non Tender	6	3	1	2	0	2	0	2	0	0	0	3	0
Downward	Firm	Fixed	Tender	9	3	0	2	1	2	1	1	1	0	0	3	1
Downward	Firm	Freely Mobile	Non Tender	6.5	2	0	3	1	0	0	0	0	0	0	3	1
Downward	Firm	Fixed	Non Tender	6.2	3	1	2	1	3	0	1	0	2	0	3	0
Downward	Firm	Fixed	Tender	7	2	0	2	1	2	0	1	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6.4	3	1	2	1	3	0	1	0	2	0	3	1
Downward	Firm	Freely Mobile	Non Tender	6.7	2	1	2	1	2	0	2	0	0	0	3	0
Downward	Firm	Freely Mobile	Non Tender	6.7	3	0	3	1	2	0	2	0	1	0	2	0
Downward	Firm	Fixed	Non Tender	6.2	3	1	2	1	3	0	1	0	2	0	2	1
Mid Position	Firm	Freely Mobile	Tender	7	2	0	2	1	2	0	1	0	0	0	3	1
Downward	Firm	Fixed	Tender	6.7	2	1	0	0	0	0	2	0	0	0	3	0
Downward	Firm	Fixed	Non Tender	6	2	0	2	1	2	0	2	0	0	0	3	1
Downward	Firm	Fixed	Non Tender	6.7	3	0	3	0	3	0	2	0	0	0	3	0
Downward	Firm	Fixed	Tender	7	2	0	2	1	2	0	1	0	0	0	3	0