

Comparative Study of Efficacy of Cryosurgery and Albothyl Solution in the Management of Cervical Erosion in a Rural Hospital.

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Abstract: prevention of carcinoma cervix is one of the most successful strategy of cancer control and prevention. In developing countries still carcinoma cervix is one of the most common cause of death, the incidence being 99/100000 in India. Hence the importance of screening and treatment of benign cervical lesions like cervical erosion, a common gynaecological finding which has inflammatory or neoplastic origin. In 2009 WHO updated the recommendation of cryosurgery in CIN and cervical erosion. **AIMS AND OBJECTIVES:** To compare the effect of cryosurgery and albothyl solution in cases of cervical erosion after ruling out CIN3 and malignancy by Pap smear. To study the efficacy and time taken for healing of the lesion and the number of applications required. **MATERIAL AND METHODS:** 60 cases attending the gynaec OPD at Adichunchangiri institute of medical sciences, Bellur over a period of one year were included in this study. After exclusion of malignancy by Pap smear 30 cases were treated with cryo and 30 cases with albothyl solution. **CONCLUSION:** Cervical erosion which is one of the commonest gynaecological problem characterised by vaginal discharge, post coital bleeding, low backache can be maximally benefited by cryo as well as local application of albothyl solution. cryo has 90% success rate whereas albothyl solution scores over cryo in being cheap and accessible to patients.

Keywords: Cervical erosion, Carcinoma, Cryosurgery, Albothyl solution.

I. Introduction:

Cervical erosion / ectopy is histologically defined as the replacement of squamous epithelium of portio vaginalis by columnar epithelium beyond external os and ranges from 17 - 50%.¹ Studies have proved that there is an association between ectopy and chlamydial trachomatis, HPV and immunodeficiency virus.^{2,3} There is also an association between ectopy and CIN as precancerous lesions often develop at squamocolumnar junction and is vulnerable to oncogenic effects of carcinogens and can be treated.^{4,5} ACOG recommends all females who have been sexually active or have reached 18 yrs, an annual pap smear test and pelvic examination should be done. As the disease takes 10 -20 years to progress from preinvasive to invasive disease, preventive measures such as screening and treatment modalities should be adopted.^{6,7}

The specificity of cytology is 98%, sensitivity is 57%, false negative rate is 49%. This can be reduced by liquid based cytology. According to ACOG, screening begins at 21 yrs upto 68-70 yrs. It is done every 2 yrs till 30 yrs and later from 30 yrs if 3 consecutive smears are negative combined with HPV testing. Cytology is reported by Bethesda system and treated with either ablative procedure (thermo/cryo) or excisional procedures (LEEP/CO2 laser cone/cold knife conisation). Present study was planned to evaluate cervical erosion after cervical cytology and investigations of STD diseases. To evaluate the effect of cryosurgery (greek word icy cold) and albothyl solution on cervical erosion.

CRYOSURGERY: (Cryos in greek means cold). It is the application of cold to destroy abnormal or diseased tissue. It is minimally invasive, out-patient procedure. Advantages: Cost effective, Does not damage neighbouring healthy tissue, No proven adverse effect, High cure rate of 85%. Disadvantages: No tissue specification for HPR evaluation, Cannot treat larger & extensive lesions in endocervical canal which should be followed by colposcopy.⁸

ALBOTHYL SOLUTION: (Phenyl methyl aldehyde) Albothyl gel with policresulero 0.09 grams (as liquid 360mg/g) is a gel which has got a wide range of uses in surgery, dermatology, cervical erosion, cervicitis, vaginal infections⁹ & for hemostasis also. **PROPERTIES:** It will accelerate the process of wound healing process when the necrotic tissue gets detached, It restores the acidic pH of vaginal canal, Stimulates the growth of Döderlein bacilli, It is keratolytic, Promotes the peeling of damaged epithelium and Promotes early cervical-vaginal re-epithelialisation. **ADVANTAGES:** It has 85-95%.^{10,11} It is simple, safe, effective & cheap. Alternative to cryo in PHC & rural hospital.

II. Materials And Methods :

The study was conducted among 60 patients diagnosed with cervical erosion attending OBG outpatient department ,Adichunchangiri institute of medical sciences ,B.G.nagar over a period of one year. Of these 30 patients were allocated to cryogroup(group A) and 30 patients were allocated to albothyl group(group B). The efficacy of cryo and albothyl solution were measured in terms of time taken for complete healing, number of applications required , associated complications and its success rates.

A detailed history regarding Name, age, sex, socio-economic status, previous STD, organic diseases, allergic to test ingredients, detailed obstetrics and menstrual history was taken. Previous history of OCP's,IUCD insertion & history and treatment of white discharge was taken and Perspeculum&Pervaginal examination was done.All patients were counseled and treated on outpatient basis in minor OT.

INCLUSION CRITERIA: 1.Patient with cervical erosion aged between 20 & 35 years,No proven or suspected genital tract malignancyWilling for follow-up**EXCLUSION CRITERIA:** 1.Patient having organic disease , 2.Pregnant women ,3.Who are using local or systemic antibiotics , 4.Patients with abnormal cytology , 5.CIN3, 6. Large lesions.

In all cases pap smear was taken to rule out abnormal pathology. They were asked to visit after periods for cryo or albothyl solution applications. Patients were followed up & after 3rd visit pap smear was repeated. For group A, cervix was swabbed with 3% acetic acid to dissolve the mucus & suitable probe was selected for cryounit. 3 minutes freeze, 5minutes thaw, freeze technique (Joule Thompson effect) by using N2O as a refrigerant was used. Freezing was continued till ice-ball was placed 2-3mm beyond the area of erosion for 3 min. Duration, complications & side-effects were observed & recorded. Patients were asked to come for follow up at 4th week, 8th week & 12th week & P/S examination was done at each visit in 2nd& 3rd visit, cryo is repeated for 180-300 seconds if not healed.

For group B, after albothyl application, patients were advised to come for follow up at 7th day, 14th day, 21st day & 28th day after initial treatment. During each visit P/S was done, symptoms & signs were assessed. Both the groups received antibiotics for 5days.

III. Observation & Results:

In our study majority of the women were in the age group between 20 to 30 years, multipara & 75% belonged to low socio-economic status. 70% had low grade infections associated with cervical erosion. Majority of them presented with white discharge per vagina associated with backache.

A. Distribution of cases according to symptoms in both groups A and B :

SYMPTOMS	NO OF CASES	PERCENTAGE
White discharge P/V	30	50%
White discharge with backache	15	25%
White discharge with pain abdomen	10	16.5%
White discharge with burning micturition	5	8.3%

B. Distribution of cases according to pre treatmentpap smear report.

PAP SMEAR REPORT	NO OF CASES	PERCENTAGE
Inflammatory smear	45	75%
Unsatisfactory	10	16.5%
Normal	5	8.4%

All cases underwent pap smear test and majority of the reports showed inflammatory smear coinciding with cervicovaginal infections

C. Distribution of type of lesions (A+B):

LESIONS	NO OF CASES	PERCENTAGE
Erosion on both the lips	30	50%
Erosion on anterior lip	10	16.5%
Erosion on posterior lip	15	25%
Erosion with nabothian follicle	5	8.4%

Perspeculum examination showed erosion was the commonest lesion. Among them involvement of both lips and posterior lip was more compared to anterior lip.

D. Complications during procedure:

COMPLICATIONS	GROUP A		GROUP B	
	NO OF CASES	PERCENTAGE	NO OF CASES	PERCENTAGE
Discomfort with pain	15	50%	-	-
Slight pain	1	3.1%	-	-
No complications	14	47%	15	50%
Local irritation	-	-	10	33%
Burning sensation	-	-	5	17%

In our study the main complication was discomfort with slight pain during cryosurgery and local irritation was the main complication in group B patients. Other complaints were minimal such as flushing, headache, bleeding, burning sensation. Vasovagal attack was nil.

E. Complications after the procedure (A+B):

COMPLICATION	NO OF CASES	PERCENTAGE
Vaginal discharge	50	83%
Bleeding	4	7%
Post coital bleeding	2	3.1%
Dyspareunia	2	3.1%
Pruritis	2	3.1%

Majority of the patients had vaginal discharge more so in albothyl group and 3% had discharge of necrotic tissue in group B.

F. Post treated cases with pap smear report :

PAP SMEAR	NO OF CASES	PERCENTAGE
Inflammatory smear	10	16.6%
Normal	45	75%
Unsatisfactory	5	8.3%

Pap smear was taken at the end of 2nd visit in cryo group and 4th visit in Albothyl group. Majority had normal smear.

G. Interval healing :

GROUP A			GROUP B		
INTERVAL IN WEEKS	NO OF CASES	PERCENTAGE	INTERVAL IN DAYS	NO OF CASES	PERCENTAGE
8	20	66.2%	7	18	60%
10	8	26.2%	14	9	30%
12	2	6.6%	21	3	10%
			28	-	-

In our study healing after cryo was 66% by 8 weeks and the rest healed by 10 – 12 weeks. In group B (Albothylgp) 60% of cases healed by 1 week and the rest healed by 3 weeks.. 3 (3.1%) cases needed second application.

IV. Discussion:

Unhealthy cervix comprises a group of lesions like chronic cervicitis, cervical erosion, endocervicitis, polyp lacerations, leucoplakia which can harbor pre-malignant lesions. Hence these conditions when encountered should be evaluated to rule out pre-malignant lesions of the cervix as there is relation between squamous metaplasia & induction of squamous cell carcinoma, also susceptible to STD infections to species of Chlamydia, N.Gonorrhoea resulting in pelvic pain¹², post-coital bleeding¹³ and vaginal discharge which is cumbersome. Hence, Leppaluoto¹⁴ et al was in favour in treating the same and according to Kauraniemi et al it would prevent 15% incidence of pre-malignant lesions.

STUDY	WATERY DISCHARGE	PRURITIS	SLIGHT BLEEDING	DYS-PAREUNIA
Our study	86%	5%	10%	2%
PK Vaidya et al	89%	0.7%	36%	0.7%
Tounsed et al	90%	-	-	-
Junnarkar et al	90%	-	-	-

In our study, 72% of patients belonged to low socio-economic status and were from rural areas, belonged to reproductive age group between 20-30 years. This study was similar to study by A Mukerjee et al (84%) , PR Vaidya et al (85%) and Dr.sayedafiroza Begum(81%).

Most of the patients presented with white discharge alone or with backache (72%). This study was similar to study conducted by Junnarkar et al(90%), A Mukherjee et al(74%) and MalathiSholarpurkar et al (97%).

Main complication during the procedure was discomfort with slight pain (50%) and slight bleeding (3.1%) almost similar to study conducted by A Mukherjee et al where 1% of the cases had slight bleeding.

86% of the cases in our study developed watery discharge after cryo similar to Taunsted et al (90%), PKVaidya et al (89%) and Junarkar et al(90.4%).

Healing of the cervix is achieved completely by metaplasia of mucus membrane to squamous epithelium which occurs in 2-10 weeks¹⁵. Hence we took pap smear after 12 weeks of therapy. Screening after therapy have shown high success rate of 95%.

STUDY	GROUP A
Our study	90%
Junnarkar et al (78)	95%
Khuranna et al (80)	97%
Ostergard (68)	90%
STUDY	GROUP B
Our study	95%
Dr.Ashley Colombo et al	85%
J Masengi et al	80%

V. Conclusion:

Cervical erosion which occurs in reproductive age group may be forerunner to CIN and later to Carcinoma cervix if unscreened and neglected. Hence thorough evaluation is needed for early detection of precancerous lesions. This can be accomplished in rural population by simple screening procedure as pap smear. Benign lesions respond well to local and systemic antibiotics. Premalignant lesions need ablative therapy and subsequent follow up.

Both cryo and albothyl solution have shown to be simple, safe, effective & cheap treatment for cervical erosion. Treatment with albothyl solution scores over cryo in being cheaper and cost-effective for rural population and avoids unnecessary surgery and its sequelae

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