Colposcopic Evaluation of STD’s

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ABSTRACT:
Objectives. To differentiate between suspicious lesions requiring biopsy and insignificant lesions thus reducing the number of biopsies.

Methods. Hundred STD outpatients from January to May 2008 were included in the present study. After microscopic examination of wet films, endocervical smear and PAP smear, colposcopic findings without and with green filter, acetowhitenig,and Lugol’s iodine uptake were noted as normal, grade 1, 2 and 3. Biopsy was taken from suspicious sites. Colposcopic findings were correlated with PAP smear and biopsy reports.

Observations. Dysplasias were common in sexually active multies and HIV positives. Leucorrhoea of erosion cervix, cervical polyps, cervical tears, candidiasis and bacterial vaginosi colposcopically did not require biopsy. Benign grade1 changes (41%) correlated with PAP smear reports (inflammatory36% mild dysplasia 18%). The premalignant grade 2(13%) & grade 3 (5%) colposcopy changes of chronic cervicitis histologically revealed chronic nonspecific cervicitis (5%), chronic nonspecific papillary endocervicitis (1%), TB cervicitis (1%),mild (3%), moderate (1%) and severe dysplasia(1%). Itching genitalia included candidiasis (grade1), trichomoniasis (grade2&3), leukoplakia vulva(grade2),kraurosis vulva(Grade2), senile vaginitis (Grade1), atrophic vaginitis (grade2 with moderate dysplasia on HPE).In Genital swellings decubitus ulcer and warts showed Grade 2 changes.Ulcer genitalia (grade1), ulcer cervix (grade 3) was associated with diabetes mellitus.

Conclusions. Colposcopy is of immense help in locating the site of biopsy of precancerous conditions. Insignificant colposcopic lesions correlated with PAP smear findings. STDs with persistant inflammatory smears, anogenital warts, trichomoniasis and HIV positivity presented with more dysplastic changes.

Key message: Colposcopy is useful for early diagnosis of precancerousSTDs and helps to locate the site of biopsy.

Key words: Colposcopy, suspicious sites for biopsy, acetowhitenig, iodine uptake

INTRODUCTION:
Colposcopy is examination of vagina and cervix to study their morphology with a binocular microscope using white LED light for illumination. In screening programs aimed at detecting cervical cancer, colposcopy plays an important adjuvant role with cytology and histology. Asymptomatic STDs are responsible for long term morbidity and spread of STDs in the community. Hence, patients with STDs or those with abnormal PAP smear should be evaluated by colposcopy and colposcopy-directed biopsy. The aim is to differentiate between suspicious lesions requiring biopsy and insignificant lesions not requiring biopsy, thus reducing the number of biopsies.

MATERIAL AND METHODS:
Setting: OPD of Department of DVL, Rangaraya Medical College, Kakinada.
Design: Prospective observational study
Tenure: January to May 2008

Study Population: Inclusion criteria: 100 Outpatients of DVL OPD with abnormal vaginal discharges, benign cervical lesions, postcoital or postmenopausal bleeding, metrorrhagia, swellings of genitalia, warts, pruritus vulva, known HIV positives and other STD complaints referred from gynaecology OPD to DVL OPD, GGH, Kakinada were included in the present study. Exclusion criteria: Clinically suspected cases of carcinoma cervix were screened at gynaec OPD and excluded from the study.

Technique of Examination: After an informed consent for colposcopy, a detailed general examination and speculum examination were done. Vaginal discharges were collected for normal saline and KOH wet mounts to detect trichomonads, candida and clue cells. Endocervical swab for gonococci was taken. After treating local vaginitis, PAP smear was taken from the ectocervix during the second half of the menstrual cycle in all cases. Patients were instructed to abstain from sexual intercourse and avoid using any vaginal medication or contraceptives 48 h before sample collection. PAP smear was immediately fixed using 95% ethyl alcohol and ether to avoid air drying. The vulva, vagina and cervix were cleaned with normal saline. Colposcopic examination of the lesion was carried out. Vessels were better visualised with green filter. Acetic acid 5% for vulval lesions and 3% for vaginal and cervical lesions was applied. Acetowhitening and Lugol’s iodine uptake were noted and graded as Grade 1, 2 or 3.

Colposcopy of the vulva: 1. Examination after smearing with a water soluble lubricant. 2. Prolonged acetic acid test.: The junction between the glycoprotein bearing vaginal epithelium & keratin producing vulval epithelium is at high risk for intraepithelial neoplasia. 3. Abnormalities: Diffuse or localized acetowhite, leukoplakia, micro papillae, papules. Punch biopsy: was taken from the abnormal colposcopic sites (acetowhite areas unstained with iodine), areas of keratosis and unusual lesions difficult to interpret by colposcopy.

RESULTS:

1. Age: Highest incidence (85%) of colposcopic abnormalities were in sexually active age group (20-39).

2. Parity: The percentage of dysplasia increased with increase in parity. In nullipara (8%), bacterial vaginosis, candidiasis, trichomoniasis, warts and HIV infection are noted depending upon the promiscuity.

3. Colposcopic grades: There was some overlap and combination of symptoms with white discharge like burning micturition, irregular periods, postcoital bleeding, pain abdomen, dyspareunia and itching genitalia.

- White discharge (36%): Chronic non-specific cervicitis (24%), TB cervicitis (1%) and trichomoniasis (6%) showed grade 2 changes. Leucorrhoea presenting as erosion cervix, cervical polyps, cervical tears and bacterial vaginosis showed grade 1 changes not requiring biopsy.
- Itching genitalia (32%): candidiasis (25%), genital scabies (1%), senile vaginitis (1%) showed grade 1 changes. One case of leukoplakia vulva with grade 2 changes, and one out of 3 cases of atrophic vaginitis case having grade 2 changes showed moderate dysplasia on HPE.
- Ulcer Genitalia: All 6 had grade 1 and inflammatory PAP smear. Ulcer cervix (figure 4) in one case of diabetes mellitus showed grade 3 changes.
- Swelling genitalia (9%): one case of decubitus ulcer showed grade 2 changes. Out of 4 cases were genital warts, one showed grade 2 acetowhitenning on cervix.
- HIV: 2 Out of 5 known HIV patients had grade 2 cervical changes, inflammatory PAP smear, CIN2 and 3. 10 HIV positives were detected on screening. HIV associated STDs noted were acute or chronic cervicitis, candidiasis, scabies, recurrent herpes, cervical herpes, pregnancy with warts, latent syphilis with non specific vaginitis, condylomata lata, Bartholin cyst trichomoniasis.
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VDRL reactivity is 3%.
Miscellaneous findings are keratosis, atrophy, erosion, inflammation and cervical polyps.
Vulval lesions: In(2%) Bartholinitis, (1%) molluscum contagiosum and (1%) folliculitis cases colposcopy helped in magnification of the lesions for differential diagnosis but cervix had no abnormality.

DISCUSSION:
Asymptomatic STDs are responsible for the long-term morbidity and spread of STDs in the community. Hence patients with abnormal Pap smear who do not have a gross cervical lesion were evaluated by colposcopy and colposcopy-directed biopsy.

Recent recommendations of FIGO for management of abnormal smear (Benedet, 2000)
Persistent inflam., persistent ASCUS, LSIL, HSIL, AGCUS, Invasive lower than P.Dasari et al study (37 years and 2.6) and higher than Seckin and colleagues study (30.2 years and 1.7). Wilson and colleagues found increased incidence of STDs & abnormal colposcopic features in patients above 25 yrs of age. These findings correlate with the present study.

Specific infections: In the present study, specific infections were detected in 37% compared to P.Dasari et al study (only 8%). This was probably due to the additional bedside tests done in the present study or higher incidence of STD cases attending to our hospital than JIPMER.
Benign lesions (grade 1) are found in 41% in the present study vs Seckin and colleagues-46.2% correlated with Pap smear reports inflammatory 36% and mild dysplasia 18%.
Premalignant lesions (grade 2 and 3) are 18% vs. P. Dasari2 -20.9%, Fish-3.5%. Seckin-8%.
Mc.Laclin4 and colleagues found 19% of CIN2 or worse similar to the present study (18%). Patients with persistent inflammatory smears had high degree of CIN. Specific infections noted in the present study were 37%, compared to 8% in P. Dasari2 study which may be due to higher incidence of STIs at GGH, KAKINADA than JIPMER, Pondicherry. Colposcopically benign lesions in the present study were 41% compared to Seckin study (46.2%). Premalignant (grade 2 and 3) (figure 1 & 2) in the present study were 18% Dasari study (20.9%) ,Frisch5 study (23.5%), much higher than that of Seckin & colleagues (8%). No cases of malignancy were noted as in series of Seckin & Frisch, but 1 case was reported by P. Dasari. Mc Lachlan & colleagues found 19% cases of CIN2 or worse similar to the present study (18%).
No case of malignancy was noted in the present study as in that of Sicken6 and Frisch5 but P. Dasari noted one case of malignancy.

Colposcopy±biopsy

Normal or LSIL

6 monthly smear x 2LEEP

Normal Persistent

Annual screening

Colposcopy of genital HPV: The expression of HPV viral activity may be clinical or
subclinical when it is recognizable only on colposcopy. Cervical cancer is predominantly sexually transmitted. The association between certain oncogenic strains of HPV and cervical cancer is well documented. Of more than 70 types of HPV, more than 35 are associated with anogenital disease and 20 or more are associated with cancer. Exophytic is usually caused by cutaneous tropic viruses (6,11). Flat are more likely to contain medium(31,33) or high risk(16,18) HPV types. Flat condyloma & mild dysplasia represent the productive HPV infection (Reid,1993)³. Meisels et al⁸ (1982) described florid, spiked, flat, condylomatous vaginitis. The most common HPV types detected in cervical lesions are found in 77% of HSIL (CIN II-III) and in 84% of invasive cancer.

In the present study, four warts cases identified (4%). One case of inflammatory PAP smear with candida showed thick acetowhiteneting over the cervix(figure.3)In the present study all 6 non HIV cases of ulcer genitalia showed Grade I changes on colposcopy and inflammatory PAP smear ,whereas 2 out of 14 HIV positives of which 5 were known positives, showed grade II changes(figure.1).This correlates with the finding of Archana and YS Marfatia et al³ that RTI are common in HIV and need PAP Smear and aggressive screening of STIs as done in the present study.

Figure 1. Grade 2 changes showing fine punctuation

Figure 2. Grade 3 changes showing coarse mosaic pattern

Figure 3. Grade 3 changes showing acetowhiteneting of warts

Figure 4. Negative iodine uptake in ulcer cervix (ca cervix)
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Vaginal and vulval lesions noted in the present study were atrophic vaginitis, subclinical papilloma virus infection showing acetowhitening of vulval epithelium (figure 3), leukoplakia vulva and herpetic ulcers.

Correlation of colposcopy with pap smear and or histopathology: Colposcopic findings were normal in 40%, grade1 changes in 41%, grade 2 in 13% and grade3 in 5%, unsatisfactory colposcopy in1%.Out of 18 suspected (grade2 and 3 cases) of chronic cervicitis, histopathology revealed chronic nonspecific inflammation-5% ,chronic nonspecific papillary endocervicitis in 1%,TB cervicitis 1%, mild dysplasia in 3%,moderate dysplasia 1% and severe dysplasia 1%.One case of leukoplakia vulva & one atrophic vagintis case with grade 2acetowhitening had moderate dysplasia on histopathology.

PAP smear: was inflammatory smear in 36%, mild dysplasia in 18% ,moderate dysplasia in 3% others are normal.

2. Failure to select appropriate biopsy sites, enough biopsies, sufficient volume of tissue.
3. Failure to accurately record colposcopic findings

Future research in colposcopy (hilgarth, 1998):
1.Computerized colposcopic documentation & consecutive analysis of colposcopic findings.
2. Clinical significance & biologic behavior of minor lesions visible with colposcopy in the presence of different HPV types.
3. Clinical significance & relation to HPV infection of minor lesions beyond the TZ.

CONCLUSION:
Colposcopy is of immense help in locating the site of biopsy.Asymptomatic STDs with abnormal PAP smears, persistent inflammatory smears, anogenital warts, trichomoniasis and HIV positivity presented with more dysplastic changes. Colposcopy combined with wet film, Gram’s stain, PAP smear and histopathology improved the accuracy of diagnosis. Timely diagnosis of suspected precancerous conditions with colposcopy alerts clinician for early treatment, prevents invasive cancer and saves lives. Vulvar lesions in vulvodynia related to HPV infection, colposcopy helped in locating the site of biopsy.

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REFERENCES
