

1 Correlational Analytical Study of Symptomatology, Pap and
2 Colposcopic Findings in Reproductive Age Group Women in a
3 Tertiary Care Centre

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7

8 **Abstract**

9 Background: The current study is done to study cervical epithelial changes in a reproductive
10 age group women at tertiary care center through investigation modality called Pap smear and
11 its correlation with various symptoms and colposcopic findings. Methods: This is a
12 retrospective analytical study of 79 women of reproductive age group done at CAMA AND
13 ALBLESS HOSPITALS. The cervical smear was taken from all patients using the Ayre's
14 spatula by scrape cytology method. Then we did Colposcopy for patients with highly
15 suspicious malignant and unhealthy cervix and with inflammatory pap smear not relieved on
16 antibiotics. Finally, cervix biopsy was done for cases for suspected malignancy on the Pap
17 smear. Results: Inflammatory smears were seen in 35.44

18

19 *Index terms—*

20 **1 Introduction**

21 cervical cancer continues to be a worldwide problem. In developing countries, with limited health care facilities,
22 cervical carcinoma is the second most common cause of cancer death in women. Invasive cancer of cervix
23 is considered a preventable disease because it has a prolong preinvasive state and with the help of cervical
24 cytological screening programmes and treatment of preinvasive lesions, we can reduce the incidence of cervical
25 cancer. It is anticipated that in developing countries the percentage of women who never had PAP test; leading
26 to cervical cancer is around 60%. (1). It accounts for 80% of deaths in a developing country like India. (2)
27 However worldwide the incidence of cervical cancer is decreasing and it is being diagnosed at an earlier stage.

28 Epidemiological data indicate that the incidence of cervical cancer will continue to be high due to poor hygiene,
29 early marriage, multiparity, lack of screening facility. In order to control the disease, cytological screening should
30 be undertaken routinely and intensively (3). The dramatic reduction in the incidence of cervical cancer in
31 developed countries is because of the widespread use of cytological screening test. (??) Various screening
32 methods are available like cytology by Pap smear, visual inspection of the cervix with acetic acid and/or Lugol's
33 iodine, HPV-DNA Test, Liquidbased cytology, etc.

34 Pap smear is an effective method of cervical cancer screening with a low sensitivity rate. It is the laboratory
35 method to examine the exfoliated or scraped cells to detect dysplasia. It is a simple routine outpatient procedure
36 which is less expensive and popular screening modalities at various centers. PAP smear and gynecological
37 examination should be performed for any unexplained discharge or irregular bleeding as they may be signs of
38 cervical and other genital malignancies as there have been cases who had bleeding PV and were denied Pap smear
39 many times only to present with advanced cervical cancer.

40 In 2012, all the three-organization the American College of Obstetricians and Gynecologists (ACOG), American
41 Cancer Society (ACS) and U.S. Preventive Services Task Force (USPSTF) recommended that: (5) The cytology-
42 based screening programmes have been successful in reducing the incidence of cancer cervix by 80 % and deaths
43 due to it by 70%.

5 RESULTS

44 2 II.

45 3 Methods

46 We did a retrospective analytical study of 79 women in reproductive age group women over one year at Cama
47 and Albless hospitals, Mumbai.

48 We established the correlation of clinical symptomatology and Pap smear findings and colposcopic findings.
49 The patients in the reproductive age group that is 18-45 were selected. We included patients with chief complaints
50 of pain, menstrual complaints, patients who had come for follow up and patients who had come for infertility
51 consultation. A detailed history taken and per speculum examination of the patient was done. Patients who
52 came to the Gynaecology OPD the procedure was explained to the patient in detail and examination done in
53 dorsal position after emptying the bladder. Per speculum examination was done without using lubricants. Naked
54 eye examination of the cervix was done to evaluate its color, shape, size, the presence of any lesions, discharge.
55 The cervical smear was then taken using the scrape technique using the Ayre's spatula.

56 The longer end of the spatula was inserted into the external Os and rotated through 360 ° maintaining firm
57 pressure so as to scrape the squamocolumnar epithelial junction throughout its circumference. Care was taken
58 to include all abnormal looking areas. Then we withdraw the spatula without touching the vaginal walls to avoid
59 contamination with cells from the lower genital tract. The smear was made by spreading the scraped material
60 evenly, with a circular motion on a glass slide having the patients' identity labeled then we fixed it in a fixative
61 solution, which contains 95% alcohol and ether for 15-30 minutes and then sent to the cytopathology laboratory.
62 The smears were stained according to the modification of Papanicolaou (1942). (??)

63 The patients who had completed a course of antibiotics, but continued to have symptoms, patients who
64 had high suspiciousness of cervical cancer underwent colposcopy. A colposcopic examination in which whole
65 of transformation zone visualized completely we labeled to be a satisfactory colposcopy. If a squamo-columnar
66 junction is inside the endocervical canal and complete transformation zone is not visible it is an unsatisfactory
67 colposcopy.

68 We then correlated the findings of symptoms of the patients with PAP and colposcopic findings.

69 4 III.

70 5 Results

71 We did highest pap screening in the age group of 40-45 years followed by 35-39 years. As the parity increases we
72 found a higher incidence of pap and colposcopy. As per this study, PAP screening was most commonly done in
73 40-45 years age group followed by 35-40 years. The most common symptom for which this reproductive age group
74 underwent PAP screening was white discharge per vagina followed by pain in the abdomen and menorrhagia.
75 The PAP results revealed that most patients presenting with a complaint of white discharge had an inflammatory
76 smear, cervicitis. Some patients around 11.39% (no-9) had HPV infection which was confirmed by HPV DNA
77 and colposcopy. - - 2 1 - - - 10 Infertility 1 1 - - 1 1 4 Menstrual Irregularities 1 2 1 1 - - 1 - - 6 SCOPV 3 1 - - -
78 - - - 4 Postcoital Bleeding - - - - 1 - - 1 Spotting pv - - 1 1 - - 2 - 4 Others - 1 - - 1 - - - 2

79 The patients presenting with menorrhagia had an inflammatory smear in 7.59 %, some had endocervical cells
80 in 4.08% present and were advised repeat Pap, but did not follow up.

81 The patients who presented with something coming out per vagina had an inflammatory smear in most of
82 them. (Around 75%)

83 Patients having HPV infection had the most common complaint of white discharge PV and few of them
84 presented with other complaints like pain, menorrhagia and post-coital bleeding PV.

85 Amongst this reproductive study group, 5.06% of patients had invasive cervical cancer .75% of them we
86 diagnosed on Pap smear showing necrotic cells Malignant cells and with a hemorrhagic background. Amongst
87 the four cases which were identified to be invasive carcinoma on colposcopy, 75 % were true positive results. One
88 case was diagnosed to be HPV positive presenting with a chief complaint of white discharge and was confirmed
89 on histopathological reports. 70% of endometrial cancers. Single testing detects 10-15% false negative reading.
90 Hence a repeat PAP testing is advised every three yearly. (7) In this retrospective analytical study we studied
91 the pattern of cervical cytology in patients presenting with various symptomatology and their correlation with
92 colposcopy. The Pap smear results showed normal cervical cytology findings in 21.51 %, inflammatory smears in
93 32.91 %, ASCUS in 5.06%, LSIL in 3.7% and invasive carcinoma in 5.06% patients. The results were similar to
94 Thobbi VA et al. and Ghazal et al. (8). Another study done by Suma R shows normal 36% inflammatory smear
95 61.9% ASCUS 0.3 % LSIL 0.6% HSIL 1.2%. (9) As the PAP smear screening is advised from 21 years, hence
96 patients within the age group of 21 to 45 years were studied. The commonest age group which was screened by us
97 was 40-45 years with 34.3 % of patients belonging to this age group. Most of the patients who were studied were
98 multipara with parity > 2. It was similar to observations made by Thobbi VA et al. (8) It was observed that
99 amongst the study subject number of patient symptomatic were 35% parity 2 and above similar to observation
100 by Dasgupta A et al. (10) The various epithelial cell abnormalities were studied. ASCUS smear was advised to
101 repeat cytology after 6 and 12 months and HPV DNA testing. ASC-H, HSIL, and LSIL we advised colposcopy.
102 - - - Ectropion 2 2 - - 1 - - - Cervicitis 8 1 - - - - HPV 5 - - 1 - - 1 - Squamous Metaplasia 7 4 - 2 - 1 1 -
103 - Invasive Cancer - - - 1 - - 3 - CIN I - - 3 - - - 1

104 **6 IV.**

105 **7 Discussions**

106 Colposcopy was introduced in 1927 by Hinselmann in 1927. Colposcopy is the visualization of cervix under
107 magnification for cervical lesions. In developing countries like India, it is not economic and possible to have
108 universal cervical cancer screening due to low sources. WHO has recommended at least one smear for all women
109 at about 40 years to reduce cancer deaths by 50 % (11).

110 In this study correlation between PAP and colposcopic findings revealed that most patients presenting with
111 symptom of white discharge PV had inflammatory smear which had either normal colposcopy or showed findings
112 suggestive of HPV infection and squamous metaplasia. We further advice HPV DNA testing. Some cases had
113 polyp and ectopion on colposcopy. Most of the patients with abnormal PAP presented with the complaint of
114 white discharge PV and menorrhagia.

115 Patients having HPV infection had the most common complaint of white discharge PV and few of them
116 presented with other complaints like pain, menorrhagia and post-coital bleeding PV.

117 The correlation between Pap smear, symptomatology, and colposcopic findings suggested that most patients
118 presented with white discharge PV, menorrhagia or pain in the abdomen. The PAP results showed inflammatory
119 findings with evidence of metaplasia and cervicitis and infection of HPV DNA.

120 The patients having white discharge PV or menorrhagia had ASCUS and AGCUS on Pap smear which had
121 squamous metaplasia (3.3%), HPV infection (1.6%) and invasive cancer.

122 V.

123 **8 Conclusions**

124 The Pap smear is a simple, safe, practical and cost-effective method for early detection of cervical cancer and its
125 precursors. In low resource countries like India, it is the most logical screening modality although it has a very
126 low sensitivity; detection rates could be further improved using liquid-based cytology and the use of endocervical
127 cytobrush.

128 We can increase the specificity of this screening test by a repeat Pap test at least every three yearly. As the
129 progression from pre-invasive to invasive cancer is very slow, hence repeat PAP can detect early invasive cancers
130 and eventually decrease morbidity and mortality following cervical cancers. Women education and awareness
131 regarding cervical cytology testing should be encouraged. At the same time, the false negative of Pap smear
132 unreported needs consideration.

133 Thus Pap smear along with colposcopy can be an efficacious tool for screening to diagnose the early invasive
cancer stages which stay relatively asymptomatic. ¹

1

Age	No of cases studied	Percentage
21-24yrs	3	3.8
25-29 yrs	11	13.9
30-34 yrs	15	18.9
35-39 yrs	23	29.1
40-45 yrs	27	34.3

Figure 1: Table 1 :

2

Parity	No of cases screened	Percentage
p0	6	7.5%
P1	21	26.5%
P2	24	30.3%
>p2	28	35.7%

Figure 2: Table 2 :

8 CONCLUSIONS

3

Symptom	Inflammatory	Normal	ASCUS	AGCUS	Endometrial Cells	HPV	Reactive Cells	Necrotic Cells
Pain	6	2	-	-	2	1	-	-
White discharge	11	7	2	1	4	6	2	1
pv								
Menorrhagia	6			1				

Figure 3: Table 3 :

4

	Inflammatory	Normal	LSIL	AGCUS	ASCUS	HSIL	Endocervical cells	Haemorrhagic smear	Columnar cells
Normal	6	8			-	1			

Figure 4: Table 4 :

5

	Case 1	Case 2	Case 3	Case 4
Age	42 years	45 years	40 years	37 years
Complain	Menorrhagia	Reddish discharge pv	Menorrhagia	White discharge
pv				
Comorbidi	Hypothyroidism	Seropositive, thrombocytosis		HPV Positive
Parity	P3L3	P5L5	P3L3	
Pap	Haemorrhagic smear	Normal	ASCUS-H	Haemorrhagic smear
Colposco	Hyp invasive cancer	Invasive cancer	Invasive cancer	Invasive cancer
		Ut bulky, growth bleeds on	Ut normal, proliferative	
Eua	Growth on post lip	touch, medial parametrium involved	growth on the cervix which bleeds on touch	
Surgery	TAH +BSO	Cervical biopsy	Modified radical hysterectomy	Adv RT
HPR	Chronic cervicitis, leiomyoma	Large cell keratinising mod diff sq cell carcinoma	Mod diff sq cell carcinoma involving a lower uterine segment	

Figure 5: Table 5 :

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Figure 6:

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8 CONCLUSIONS

134 [Vidya and Thobbi Farheen] 'Cervical cytology by Pap Smear in Reproductive age group' A Vidya , Thobbi
135 Farheen . *Int j Reprod Contracept Obs Gynecol* 5 p. .

136 [Dasgupta and Nn ()] 'Community based study on prevalence of risk factors of cancer cervix in married women
137 of West Bengal'. A Dasgupta , Nn . *Indian J community Med* 2002. 1 (27) p. .

138 [ICO Information centre in hpv and cancer. Human Papilloma and Related Disease in India] *ICO Information*
139 *centre in hpv and cancer. Human Papilloma and Related Disease in India,*

140 [Jonathan et al. ()] S Jonathan , Berek , Berek , Novak's Gynecology . *15TH Addition Page no 1304*, 2015.

141 [Colgan ()] *Responding To Bethesda System Reports*, T Colgan . 2001. 47 p. .

142 [Moyer ()] 'Screening for cervical Cancer U S services task force recommendation statement'. V Moyer . *Ann*
143 *Intern Med* 2012. 12 (156) p. .

144 [Suma and Ksy] 'Screening of precancer and cancer cervix by Pap smear among women in reproductive age
145 group; a community-based study'. R K Suma , Ksy . *Intl J Community Med Public Heal* p. .

146 [Howkins and Padubidril] *Shaws Textbook of Gynecology*, Broune Howkins , V G Padubidril . p. .

147 [Sharma] *Text Book of Obstetric*, J B Sharma . p. .

148 [Reagan and Scoot ()] 'The detection of cancer of uterine cervix by cytological study'. J Reagan , R Scoot . *Am*
149 *J Obs Gynecol* 1951. 62 (52) p. 1347.

150 [Usho s. Relevance of cytological services in India. j Obs Gynecol ()] *Usho s. Relevance of cytological services in*
151 *India. j Obs Gynecol*, 1986. 379.