



PATTERNS OF CERVICAL PAPANICOLAOU SMEAR IN ADULT WOMEN ATTENDING TERTIARY CARE HOSPITAL-A CROSS SECTIONAL STUDY

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ABSTRACT

Aims: To study patterns of cervical Papanicolaou smear in adult women attending tertiary care hospital.

Settings And Design: A 2 year cross sectional study was conducted at tertiary care hospital. **Methods**

And Material: Women of various age groups attending tertiary care hospital was conducted. Detailed history, clinical examination, pervaginal and per speculum examination were done. Smears were stained with papanicolaou stain and examined under microscope. Reports were recorded according to Bethesda system of grading. **Results:** In our study majority of normal smears Percentage of patterns in pap smear showed 47.5% of smears were negative for intraepithelial lesion or malignancy, no significant cytopathology were seen in 7.5%, ASCUS 1.75%, LSIL 24.5%, HSIL 5.5%, SCC 0.5% and AGC 1%. Among negative for intraepithelial lesion or malignancy cases, 80.1% of negative for intraepithelial lesion and malignancy showed non neoplastic findings and 19.6 % showed infectious organisms. Most common organism seen was bacterial vaginosis 13% followed by candida 5.4%, herpes simplex virus 0.8% and trichomonas 0.4%. Correlation of age and pap smear finding reported, normal smears (50%), negative for intraepithelial lesion or malignancy (48.5%), ASCUS (57.1%) was commonly seen in reproductive age group. While LSIL (54%), HSIL (72.7%) and AGNOS (75%) were mostly seen in postmenopausal age group followed by premenopausal age group with LSIL, HSIL and AGC with 25.5%, 28.3% and 25%.

Conclusions: Pap smear is a relatively good method in screening cervical cancer. Postmenopausal women are at greater risk of developing premalignant and malignant lesions with predisposing factors like heavy menstrual bleeding and cervical erosion. Hence awareness and cytological surveillance is essential in postmenopausal women.

KEYWORDS : Pap smear, postmenopausal women, Bethesda

INTRODUCTION:

Cervical cancer is one of the leading cancer in women in India and worldwide¹ According to national registry programme of India cancer of uterine cervix and breast are leading malignancies seen in India.² It is one of the important causes of mortality in developing countries.³ With the better treatment of communicable disease, India is heading towards major epidemic related to non-communicable disease including cancer.⁴

Cancer cervix is unique in providing long window period amenable for early detection through suitable screening tools.⁴ It is preventable but not prevented.⁵ The objective of cancer cervix screening is detection of premalignant lesions before developing into invasive cancer reducing the mortality and morbidity to some extent.³

Human papilloma virus is the causative organism of cervical cancer and is mainly sexually transmitted.⁶ There are various screening tools for cervical cancer including cervical Papanicolaou (pap) smear, liquid based cytology, nuclear morphometry and human papilloma virus (HPV) DNA testing.⁷ Cervical papanicolaou smear is one of the simple, safe, reliable and cost effective screening tool, useful in developing countries in areas where other tools for cervical screening are not available. Cervical Papanicolaou smear test is a routine cancer screening method should be done every 3 years.⁸ Cervix desquamates irregularly, thus repeat testing increases the chance of detecting any missed abnormality.⁹ The diagnostic utility of cervical pap smear test as a first line of investigation has assumed importance in screening of cervical cancer.⁴ The most widely used system for describing cervical pap smear is Bethesda system.¹⁰

Bethesda system addresses, the need for a standard system of nomenclature so that results are comparable among various laboratories, a clear statement of specimen adequacy, a general categorization for triage and the appropriateness of making recommendation for further evaluation.¹¹

The life of women after attainment of puberty is broadly

divided into reproductive, premenopausal and postmenopausal phases. After attainment of puberty till 40 year of age is reproductive phase with regular occurrence of menstrual cycle, between 41-45 years is premenopausal phase when the ovaries gradually produce less estrogen and after 45 years postmenopausal phase begins where sustained lower estrogen level and higher progesterone level results into atrophic changes in the lower female genital tract.¹²

Previously cervical papanicolaou smear testing was recommended after the age of 40 year. But various epithelial changes are seen in the papanicolaou smear like atypical squamous cell of undetermined significance (ASUS), low grade squamous intraepithelial lesion (LSIL), high grade squamous intraepithelial lesion (HSIL) at various ages which are supposed to be premalignant lesions. In order to avoid progression upto carcinoma, there is need to screen patient at various age groups for early detection and treatment.

So present study is undertaken to study cytological patterns of cervical papanicolaou smears in adult women to detect preinvasive and invasive lesion of cervix.

AIM AND OBJECTIVE

To study patterns of cervical Papanicolaou smear in adult women attending tertiary care hospital.

Subject And Methods:

Source Of Data:

A 2 year cross sectional study was conducted at tertiary care hospital, after institutional Ethics Committee approval. Pap smears sent for cytopathological examination were studied and reported according to The Bethesda System 2014.

Inclusion Criteria :-

Cervical papanicolaou smear of adult women coming to Department of Obstetrics and Gynaecology OPD with complaints of vaginal discharge, post coital bleeding, intermenstrual bleeding, postmenopausal bleeding, cervical lesions that bleeds on touch and women coming for routine examination without any symptoms.

Exclusion Criteria :-

Patient who are unwilling to give consent.
Unsatisfactory papanicolaou smears.
Pregnant women.

Sample Size: 400 Pap smears

Duration Of Study: Total duration of 2 years from January 2021-December 2022.

Observation And Results-

The present study was carried out In the Department of Pathology for a period of 2 years. The total number of pap smear tests studied were 400. The following observations were made.

Table 1: Distribution Of Cases Within Different Age Groups

AGE GROUPS	NUMBER OF CASES	PERCENTAGE
Reproductive age group	151	37.75%
Premenopausal age group	133	33.25%
Postmenopausal age group	116	29%

Table 3- Association Of Type Of Smears And Presenting Complaints

Symptoms	Normal		NIELM		ASCUS		LSIL		HSIL		SCC		AGC	
	N	%	n	%	N	%	N	%	N	%	N	%	n	%
Vaginal discharge	04	13.3	90	37.9	03	42.8	13	13.2	02	9.0	00	0.0	00	0.0
Lower abdominal pain	02	6.6	60	25.3	01	14.2	16	16.3	06	27.2	00	0.0	01	2.5
Intermenstrual bleeding	03	3.3	18	7.5	02	28.5	22	22.4	06	27.2	00	0.0	00	0.0
Postmenopausal bleeding	05	16.6	13	5.4	01	14.2	14	14.2	08	36.3	02	100	03	75
Asymptomatic	10	33.3	18	7.5	00	0.0	02	2.0	00	0.0	00	0.0	00	0.0
Something coming out of vagina	01	3.3	05	2.1	00	0.0	14	14.2	00	0.0	00	0.0	00	0.0
Dysmenorrhea	02	6.6	08	3.3	00	0.0	06	1.0	00	0.0	00	0.0	00	0.0
Amenorrhea	02	6.6	05	2.1	00	0.0	07	7.1	00	0.0	00	0.0	00	0.0
Urinary incontinence	02	6.6	02	0.8	00	0.0	02	2.0	00	0.0	00	0.0	00	0.0
Burning micturition	01	3.3	04	1.6	00	0.0	00	0.0	00	0.0	00	0.0	00	0.0
Total	30	100	237	100	07	100	98	100	22	100	02	100	04	100

Table 3 shows association of smears with presenting complaints. In our study majority of normal smears were predominant in asymptomatic women. NIELM mostly presented with vaginal discharge (37.9%), LSIL mostly

Table 1 shows distribution of cases within different age groups in our study. Out of 400 cases most of the cases were in reproductive age group (33.75%) followed by premenopausal age group (33.75%) and postmenopausal age group (29%).

Table 2- Presenting Complaints Of Patients

Complaints	Number of cases	Percentage
Vaginal discharge	113	28.25
Lower abdominal pain	86	21.5
Intermenstrual bleeding	51	12.75
Post-menopausal bleeding	46	11.5
Asymptomatic	42	10.5
Something coming out of vagina	21	5.25
Dysmenorrhea	16	4
Amenorrhea	14	3.5
Urinary incontinence	06	1.5
Burning micturition	05	1.25

Table 2 shows percentage distribution of presenting complaints in patients. The most common presenting complaints was vaginal discharge 28.25% followed by lower abdominal pain 21.5%.

presented with intermenstrual bleeding (22.4%) followed by lower abdominal pain (16.3%). HSIL, SCC and AGC mainly presented with postmenopausal bleeding with 36.2%, 100% and 75% respectively.

Table 4 :- Association Of Type Of Smears And Parity

	Normal N=30		NIELM N=237		ASCUS N=07		LSIL N=98		HSIL N=22		SCC N=02		AGC N=04		Total	
	N	%	n	%	n	%	n	%	N	%	n	%	N	%	n	%
Nulliparous	13	43.3	96	40.5	00	0.0	08	8.1	00	0.0	00	0.0	00	0.0	117	29.5
Primiparous	11	36.6	95	40	02	28.5	43	43.8	06	27.2	00	0.0	00	0.0	157	39.2
Multiparous	06	20	46	19.4	05	71.4	47	47.9	16	72.7	02	100	04	100	126	31.5
Total	30	100	237	100	07	100	98	100	22	100	2	100	4	100	400	100

Table 4 shows majority of nulliparous women having normal smear. Primiparous women have LSIL (43.8%), ASCUS (28.5%) and HSIL (27.2%). While SCC and AGC is seen 100% in multiparous women.

Cervical erosion	73	18.25
Healthy cervix	69	17.25
Hypertrophied cervix	38	9.25
Uterine prolapse	19	4.75
Cervical growth	10	2.5

Table 5 shows most common per speculum finding was vaginal discharge 47.75% followed by cervical erosion 18.25% and healthy cervix 17.25%.

Table 5 :- Percentage Distribution Of Per Speculum Findings

	Number of cases (n)	Percentage (%)
Vaginal discharge	191	47.75

Table 6 :- Association Of Type Of Smears And Per Speculum Findings

Per speculum findings	Normal		NIELM		ASCUS		LSIL		HSIL		SCC		AGC	
	n	%	n	%	n	%	N	%	n	%	N	%	n	%
Vaginal discharge	2	6.6	172	72.5	0	0.0	17	17.3	0	0.0	0	0.0	0	0.0
Cervical erosion	1	3.3	17	7.1	2	28.5	46	46.6	8	36.3	0	0.0	0	0.0
Healthy cervix	25	83.3	33	13.9	0	0.0	11	11.2	0	0.0	0	0.0	0	0.0
Hypertrophied cervix	0	0.0	11	4.6	3	42.8	16	16.3	6	27.2	0	0.0	2	50
Uterine prolapse	2	6.6	6	2.5	1	14.2	6	6.1	5	22.7	0	0.0	0	0.0
Cervical growth	0	0.0	0	0.0	1	14.2	2	2.0	3	13.6	2	100	2	50
Total	30	100	237	100	7	100	98	100	22	100	2	100	4	100

Table 6 shows association of type of smears and per speculum findings. Majority of normal smears were found to be in patients with Healthy looking cervix (25%). Hypertrophied cervix was main finding in ASCUS (42.8%) followed by cervical erosion (28.5%). Erosion was the main clinical finding in patients showing LSIL and HSIL 46.6% and 36.3% respectively. Cervical growth was seen 100% in SCC. AGC has per speculum finding equally of hypertrophied cervix (50%) and cervical growth (50%).

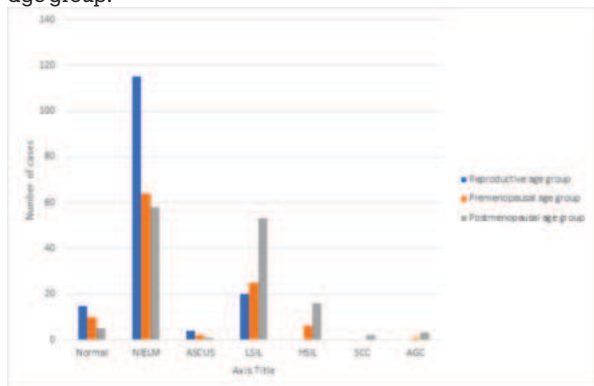
Table 7 :- Percentage Distribution Of Papanicolaou Smears

Epithelial abnormality	Number of cases	Percentage
Normal	30	7.5
NIELM	237	47.5
ASCUS	07	1.75
LSIL	98	24.5
HSIL	22	5.5
SCC	02	0.5
AGC	04	01

Table 9 :- Association Of Type Of Smears In Different Age Groups

Epithelial abnormality	Reproductive age group		Premenopausal age group		Postmenopausal age group	
	n	%	N	%	N	%
Normal	15	50	10	33.3	05	16.6
NIELM:	89	46.8	55	28.9	46	24.2
Non neoplastic findings						
Organisms:						
Bacterial vaginosis	17	54.8	06	19.3	08	25.8
Candidiasis	06	46.1	03	30	04	30
Herpes simplex virus	02	100	00	0.0	00	0.0
Trichomoniasis	01	100	00	0.0	00	0.0
ASCUS	04	57.1	02	28.5	01	14.2
LSIL	20	20.4	25	25.5	53	54
HSIL	00	0.0	06	28.3	16	72.7
SCC	00	0.0	00	0.0	02	100
AGC	00	0.0	01	25	03	75

Table 9 shows normal smears (50%), negative for intraepithelial lesion or malignancy (48.5%), ASCUS (57.1%) was commonly seen in reproductive age group. While LSIL (54%), HSIL (72.7%) and AGNOS (75%) were mostly seen in postmenopausal age group followed by premenopausal age group with LSIL, HSIL and AGC with 25.5%, 28.3% and 25%. Squamous cell carcinoma was 100% seen in postmenopausal age group.



Graph 1 :- Association Of Type Of Smears In Different Age Groups

Table 10 :- Histopathological Correlation

Type of smears	Number of cases	CIN I	CIN II	CIN III	Invasive ca
ASCUS	3	2	1	0	0
LSIL	67	44	14	9	0
HSIL	14	5	1	2	3
SCC	1		0	0	1
AGC	2	0	0	0	2

Table 10 shows histopathological correlation.

Table 7 shows 47.5% of smears were negative for intraepithelial lesion or malignancy, NORMAL smears were 7.5%, ASCUS 1.75%, LSIL 24.5%, HSIL 5.5%, SCC 0.5% and AGC 1%.

Table 8 :- Percentage Distribution Of NIELM

Negative for intraepithelial lesion or malignancy(n=237)	Number of cases (n)	Percentage (%)
Non neoplastic findings	190	80.1
Infection:		
Bacterial vaginosis	31	13
Candidiasis	13	5.4
Herpes simplex virus	02	0.8
Trichomoniasis	01	0.4

Table 8 shows 80.1% of negative for intraepithelial lesion and malignancy showed non neoplastic findings and 19.6 % showed infectious organisms. Most common organism seen was bacterial vaginosis 13% followed by candida 5.4%, herpes simplex virus 0.8% and trichomonas 0.4%.

Histopathological findings were available in 87 cases diagnosed with epithelial abnormalities on cytology. 3 cases of ASCUS, 2 of which showed CIN I and 1 showed CIN II. 67 LSIL cases, out of which majority 44 cases was correlated as CIN I, 14 CIN II and 9 CIN III. Out of 14 HSIL cases 1 was CIN II, 2 was CIN III and 3 cases was diagnosed as invasive carcinoma. 1 scc and 2 AGC was diagnosed as invasive carcinoma on histopathology.

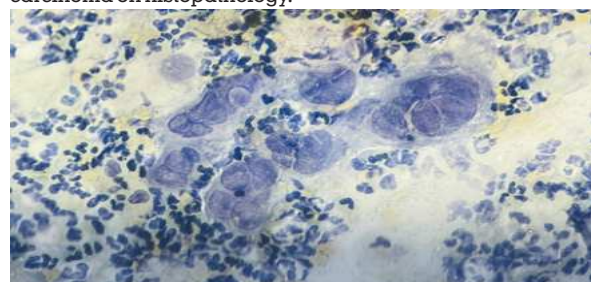
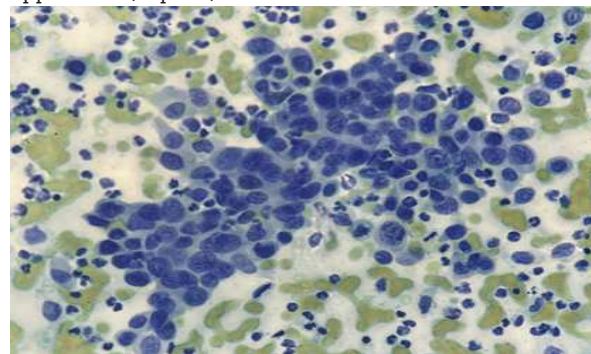


Figure 1: Herpes Simplex: Infected large cell showing multinucleation with moulding and ground glass appearance(Pap 40x)



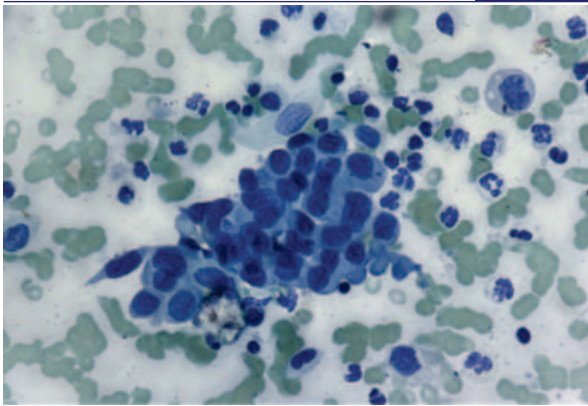


Figure 2 and 3: Squamous cell carcinoma: Scattered and clusters of tumor cells. Cells are moderately pleomorphic with high N/C ratio, hyperchromatic nuclei with prominent nucleoli. Fibre cell: Spindle shaped cell with hyperchromatic nuclei. (Pap 40x)

DISCUSSION

This is a cross sectional study, in which 400 women of different age group attending the gynaecology outpatient department at our institute were studied to know the pattern of cervical papanicolaou smear, its incidence and association with various parameters. The results are discussed as follows

Distribution Of Patients According To Age

In our study, we divided into three different age groups. Reproductive age group till 40 years, premenopausal between 40 and 45 years and postmenopausal after 45 years of age. The largest number of patients i.e. 37.75% belonged to reproductive age group. (Table 1).

Similar observations were made by other authors as follows

Table 11- Various Studies Comparing Their Observations According To Age Distribution

STUDY	% of women belonging to reproductive age group
Kumar H et al	34
Reddy K et al	32.58

Distribution of patients according to presenting complaints and its cytological correlation

Out of 400 cases, 89.5% cases were symptomatic and 10.5% cases were asymptomatic. Majority of women presented with vaginal discharge 28.25% followed by lower abdominal pain 21.5%. Which correlated well with study by Shaki O et al having most common presenting complaint of vaginal discharge 36.5% and study by Sachan et al found most common presenting complaint was white discharge per vaginum 36.96% followed by lower abdominal pain 25.63%. Similar results were found by Pandey B et al in which majority of patients presented with single or combination of symptoms like vaginal discharge and lower abdominal pain or both.

Table 3 shows association of smears with presenting complaints. In our study majority of normal smears were predominant in asymptomatic women. NIELM mostly presented with vaginal discharge (37.9%) followed by lower abdominal pain (25.3%). LSIL mostly presented with intermenstrual bleeding (22.4%) followed by lower abdominal pain (16.3%). HSIL and AGC mainly presented with postmenopausal bleeding 36.2% and 75% respectively. Patients diagnosed as SCC completely presented with symptoms of postmenopausal bleeding (100%). A study conducted by Sachan P et al also showed similar results with NIELM mainly presented as white discharge per vaginum (30.8%) followed by lower abdominal pain (25.4%). HSIL was found in two patients with post menopausal bleeding.

Distribution Of Patients According To Parity And Its Cytological Correlation (Table 4)

In our study, out of 400 women 117(29.5%) were nulliparous, 157(39.2%) were primiparous and 126 (31.5) were multiparous. Majority of nulliparous women had no significant findings in pap smear. While primiparous women has LSIL (43.8%), ASCUS(28.5%) and HSIL (27.5%). SCC and AGC was 100% seen in multiparous women. This shows that chances of developing squamous intraepithelial lesions increases with increasing parity. Tekalegan Y et al conducted a case control study to see association of high parity with increased risk of cervical cancer. In his meta-analysis he concluded that high parity is associated with a higher risk of cervical cancer. The possible explanations were increased levels of estrogen and progesterone during pregnancy causes alteration in the squamocolumnar junction. Another explanation is migration of endocervix during pregnancy and trauma caused to cervix during vaginal parity may lead to increased risk of cervical cancer in multiparous women.

Distribution Of Patients According To Parity And Its Cytological Correlation

Table 5 shows distribution of patients according to per speculum findings. Vaginal discharge was most common per speculum finding seen in 191 (47.5%) followed by cervical erosion 73(18.25%) and healthy cervix 69 (17.25%).

A study conducted by Verna A et al showed most common clinical finding on per speculum examination was discharge 115(57.5%) followed by healthy cervix 101 (50.5%) and cervical erosion 50 (25%). Similar findings were seen in study conducted by Sachan P et al having white discharge per vaginum 490 (29.69%) followed by healthy looking cervix 430(26.06%) and cervical erosion (19.21%).

Table 6 and figure 6 shows association of type of pap smear and per speculum findings. Hypertrophied cervix was main clinical finding in ASCUS (42.8%) followed by cervical erosion (28.5%). Erosion was the main clinical finding in patients showing LSIL and HSIL 46.6% and 36.3% respectively. Cervical growth was seen 100% in SCC. AGC has per speculum finding equally of hypertrophied cervix (50%) and cervical growth (50%). A study conducted by Mishra J et al suggested that cervical erosion was the most common finding in squamous intraepithelial lesion. Nikumbh and Rajput et al reported a higher incidence of erosion cervix in rural women.

Distribution Of Papanicolaou Smear

Table 7 shows 47.5% of smears were Negative for intraepithelial lesion or malignancy, normal pap smears reported were 7.5%, atypical squamous of undetermined significance (ASCUS) 1.75%, Low grade squamous intraepithelial lesion (LSIL) 24.5%, High grade squamous intraepithelial lesion (HSIL) 5.5%, Squamous cell carcinoma (SCC) 0.5% and Atypical glandular cell (AGC) 1%.

Negative for intraepithelial lesion or malignancy in our study was 47.5%. Akinflorin A et al, Kanana et al, Sachan P et al and Verma et al had similar results having NIELM 34.2%, 47.8%, 48.84% and 56% respectively. Atypical squamous of undetermined significance in our study was 1.75% which was similar to verma et al and Mahadik J et al 1% and 1.84%. When compared to Akinflorin A et al and Sachan P et al 6.5% and 2.9% our result was lower. Low grade squamous intraepithelial lesion was 24.5% in our study which was higher when compared to Akinflorin A et al, Sachan P et al and Verma A et al i.e. 11.7%, 5.09% and 5.5% respectively. HSIL was higher in our study 5.5% when compared to Kanan A et al, Mahadik J et al, Sachan P et al and Verma et al i.e. 0.8%, 1%, 0.48% and 2.5% respectively.

Higher incidence of squamous intraepithelial lesion in our case could have been the result of social and cultural

differences, age, sexual activity level, infection and presence or absence of cervical screening program in different locality and societies.

Incidence of squamous cell carcinoma was 0.5% in our study which is similar to studies conducted by Kannan A et al and Mahadik J et al i.e. 1.6% and 0.33% respectively.

Table 12 : Comparison Of Epithelial Cell Changes With Other Studies.

	Present study	Akinfolarin A et al	Kannan A et al	Mahadik J et al	Sachan P et al	Verma A et al
NIELM	47.5 %	34.2%	47.8%	-	48.84%	56%
ASCUS	1.75%	6.5%	-	1.84%	2.9%	1%
LSIL	24.5%	11.7%	2.7%	0.16%	5.09%	5.5%
HSIL	5.5%	6.2%	0.8%	1%	0.48%	2.5%
SCC	0.5%	-	1.6%	0.33%	-	-
AGC	1%	0.7%	0.1%	1%	-	-

Table 8 shows distribution of negative for intraepithelial lesion. 80.1% was nonneoplastic findings and 18.8 % was organisms. Among the organisms most common was bacterial vaginosis 13% followed by candida 5.4%, herpes simplex virus 0.8% and trichomonas 0.4%. Similar findings were seen in study conducted by Kannan A et al which reported most common organism as bacterial vaginosis.

Association Of Type Of Smears In Different Age Groups

Table 9 shows association of types of smears in different age groups. Normal smears (50%), negative for intraepithelial lesion or malignancy (48.5%), ASCUS (57.1%) was commonly seen in reproductive age group. This was in concordance with study by Mishra J et al, Akinfolarin A et al and Moammed et al where the incidence of different STD nonviral and viral is higher in perimenopausal age group and it is obvious because these are sexually active group and chances of STD transmission is higher in them.

In our study LSIL (54%), HSIL (72.7%) and AGC (75%) were mostly seen in postmenopausal age group followed by premenopausal age group with LSIL, HSIL and AGC with 25.5%, 28.3% and 25%. Squamous cell carcinoma was 100% seen in postmenopausal age group. This was in concordance with Akinfolarin A, he reported prevalence of high grade lesion is higher in older age group which could be explained by the fact that cervical cancer peaks in women between 40-50 years. Kanna et al reported LSIL 4.8 times higher in postmenopausal women. Similarly, prevalence of HSIL and squamous cell carcinoma was 1.5 times and 3 times higher in postmenopausal women. Akshata C and Banik U et al reported similar findings. A bimodal age distribution was seen in epithelial cell abnormality in women of >45 and 35-39 year age group with bulk being diagnosed in >45 year age group. While shaki O et al reported epithelial abnormality more in younger age group of women as compared to our study. This highlights to create awareness among young women about cervical cancer and motivating them to attend screening specially in rural areas.

Histopathological Correlation

Table 10 shows histopathological correlation. Histopathological findings were available in 87 cases diagnosed with epithelial abnormalities on cytology. 3 cases of ASCUS, 2 of which showed CIN I and 1 showed CIN II. 67 LSIL cases, out of which majority 44 cases was correlated as CIN I, 14 CIN II and 9 CIN III. Out of 14 HSIL cases 1 was CIN II, 2 was CIN III and 3 cases was diagnosed as invasive carcinoma. 1 scc and 2 AGC was diagnosed as invasive carcinoma on histopathology. Reddy K et al reported cytohistopathological correlation out of 6 HSIL cases, four were diagnosed as squamous cell carcinoma, one as CIN II/III and other one as chronic cervicitis. Our study also shows

discrepancy in cytohistology of squamous intraepithelial lesion which could be due to sampling error. Hence both cytology and histology samples should be from the same site.

CONCLUSION

Pap smear is a simple, safe, useful and economical tool to detect preinvasive and invasive cervical lesion at an early age group. Women above 20 years should subject to regular screening for early and accurate medical intervention to reduce disease progression and increase survival chances.

The likelihood of STD transmission is higher for women in the reproductive age range. Therefore, this young age group should be the focus of family planning, sexual education, and HPV vaccination campaigns.

The majority of preinvasive and invasive lesions are found in postmenopausal women in our study. High parity, vaginal discharge, postmenopausal haemorrhage, and cervical lesions such erosion cervix were major predisposing variables that contributed to the increased prevalence of squamous intraepithelial lesions. Women start screening late in their life which leads to increased burden of cervical cancer in elderly age group especially in rural areas where women come to tertiary health care centre after development of symptoms by the time dysplastic change had already occurred.

All of this suggests that in order to lessen the treatment burden, morbidity, and mortality linked to the onset of invasive cervical cancer, the community should be informed and made aware of the importance of routine screening through various educational studies and media programmes.

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