

Perspective Study of Cervical PAP Smears in Females of Telangana**Ranjana. R¹, S. Rama Devi²****¹Associate Professor, Department of Pathology, Mahavir Institute Medical Science & Hospital, Vikarabad, Telangana****²Professor, Department of Pathology, Mahavir Institute Medical Science & Hospital, Vikarabad, Telangana****Received: 20-03-2023 / Revised: 21-04-2023 / Accepted: 25-05-2023****Corresponding author: Dr Rama Devi****Conflict of interest: Nil****Abstract****Background:** The PAP smear cytology technique test is cost-effective, fast, and acceptable for every patient to get diagnosed with various genital infections, including CA of the cervix.**Method:** 300 females aged between 20 to 80 years with pathology in the cervix of the uterus were studied. Cervical smears were prepared by using a disposable Ayre's spatula fixed in 95% alcohol, stained by conventional PAP techniques, and interpreted according to the guidelines of the 2001 Bethesda system.**Results:** Cervical PAP smear and cervical Biopsy histopathological studies had 106 (35.3%) chronic cervicitis in ASSUS, 6 (2%) chronic cervicitis in LSIL, 12 (4%) reportive changes, 16 (5.33%) chronic clervicitis, 16 (5.33%) micro INV Ca, 8 (2.66%) CIN, in the HSIL study, 66 (22%) SSC, and 4 (1.33%) adenocarcinoma in the 330 PAP smear study.**Conclusion:** The PAP smear is a tool for screening of cervical intra epithelial lesion. It will be useful to Obstetrics and gynecologist, oncologist to treat efficiently to avoid morbidity and mortality in such patients.**Keywords:** Arey's spatula, Bethesda system, Punch Biopsy, Hysterectomy, Telangana.

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Introduction

Cervical cancer is the second most common cancer in India (about 22.8%). Screening for cervical cancer is an effective, feasible, and affordable way for early detection and management. The PAP smear technique was introduced in 1941 [1]. Cervical infections are a commonly encountered problem in women of reproductive age. They discharge foul-smelling odours and pruritis. Most of these infections are diagnosed on routine papanicolaou (PAP) smear examinations [2]. A cervical smear test is a cost-effective, fast, and acceptable test for every patient. This test can also be used to diagnose genital tract infections [3]. Various infections were reported in addition to cervical cancer. These include ethnic factors, the number of partners, and the sexual intercourse, age of the mother at first birth, steroid contraception [4]. An attempt was made to evaluate the various lesions of infections of the uterine cervix by using PAP smear techniques and cytology with histopathological findings.

Material and Method

300 female patients aged between 20-80 years visited the Pathology Department, Mahavir Medical

College & Hospital, Vikarabad, Telangana-501101, were studied.

Inclusive Criteria

All the patients referred from the OBG and Gynaecology Department for cervical PAP smear tests were selected for the study.

Exclusion Criteria

The women previously treated for CIN, cervical intra-epithelial neoplasms, and HIV infected patients were excluded from the study.

Method

300 cervical smears prepared by using a disposable Ayre's spatula fixed in 95% alcohol and stained by conventional PAP techniques were interpreted according to the guideline of the 2001 Bethesda system. Fifty (50) histopathological correlations of pre-invasive and invasive lesion corresponding cervical biopsy (punch biopsy and hysterectomy specimen) slides were studied. The clinical history of each patient was recorded. The study lasted from June 2020 to June 2022.

Statistical Analysis

Abnormal cervical smears and histopathology were classified by percentage. The statistical analysis was performed in SPSS software.

Observation and Results

Table 1: Study of prevalence of abnormal cervical smear in different age groups

- ASSUS– was 136 (45.3%) from 20 to 80 years of age.
- AGUS– 6 cases in 31-40, 8 in 41-50, 2 in 51-60 years of age, total 16 (5.30%)
- LSIL– 4 in 20-30, 24 in 31-40, 16 in 41-50, 4 in 51-60 total, 48 (16%)
- HSIL – were 34 (11.3%) in 20 to 80 of age
- SCC – 12 in 31-40, 8 in 41-50, 26 in 51-60, 4 in 61-70, total 50 (16.6%).
- Malignant – 4 in 41-50 years of age, 2 in 51-60, 46 in 61-70, 2 in 71-80, total 12 (4%).

- Adenoma – 2 cases in 61-70, 2 in 71-80 years of age

21-30 years of age had 16, 31-40 had 88, 41-50 had 120, 51-60 had 50, 61-70 had 20, 71-80 had 6 cases.

Table 2: Cervical smear and cervical biopsy histopathology study

- ASSUS – PAP smear had 106 (35.3%) chronic cervicitis
- AGUS – had 6 (2.1%) chronic cervicitis.
- LSIL – had 12(4%) had chronic cervicitis.
- HSIL – had 12 (4%) reparative change, 16 (5.33%) chronic cervicitis, 16 (5.33%) micro INV CA, 8 (2.66%) had CIN.
- SSC PAP smear had 66 (22.2%) cases, 4 (1.33%) adenocarcinomas, Adenocarcinoma was 2 (1.33%).

Table 1: Study of prevalence of abnormal cervical smears in different age groups

Diagnose	20-30	31-40	41-50	51-60	61-70	71-80	Total (%)
ASSUS	8	38	70	12	8	-	136 (45.5%)
AGUS	--	6	8	2	--	--	16 (5.33%)
LSIL	4	24	16	4	--	--	48 (16%)
HSIL	4	8	14	4	2	2	34 (11.3%)
SCC	--	12	8	26	4	--	50 (16.6%)
Malignant positive	--	--	4	2	4	2	12 (4%)
Adeno carcinoma	--	--	--	--	2	2	4 (1.3%)
Total	16	88	120	50	20	6	300

ASSUS = Atypical squamous cell of undermine significance
 AGUS = Atypical glandular cell of undermined significance
 LSIL = Low grade squamous Intraepithelial Lesion
 HSIL = High grade squamous Intraepithelial lesion
 SCC = Squamous cell carcinoma

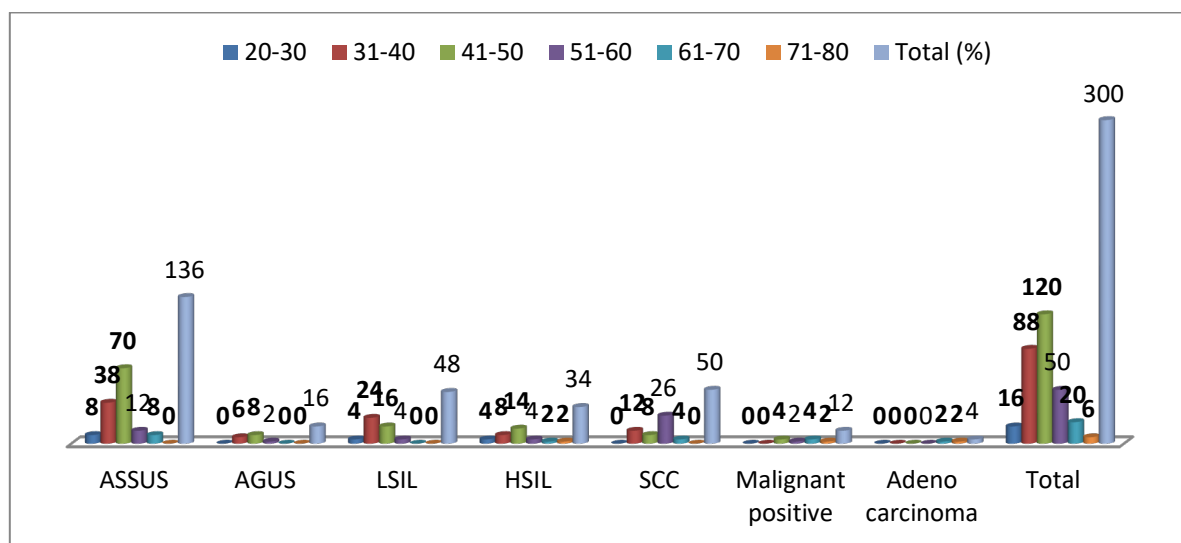


Figure 1: Study of prevalence of abnormal cervical smears in different age groups

Table 2: Cervical PAP smear and cervical biopsy histopathology

PAP smear	Number	Histopathology	Number with percentage (%)
ASSUS	142	Chronic cervicitis	106 (33.3%)
		Normal Cervicitis	36 (12%)
AGUS	12	Chronic cervicitis	6 (2%)
		Normal Cervicitis	6 (2%)
LSIL	16	Chronic cervicitis	12 (4%)
		Normal Cervicitis	4(1.3%)
HSIL	56	Repartive Change	12 (4%)
		Chronic cervicitis	16 (5.3%)
		Micro INV CA	16 (5.3%)
		CIN	8 (2.6%)
		Normal cervicitis	4 (1.3%)
SCC	70	SSC	66 (22%)
		Adenocarcinoma	8 (1.3%)
Adenocarcinoma	4	Adenocarcinoma	4 (1.3%)
Total	300		300

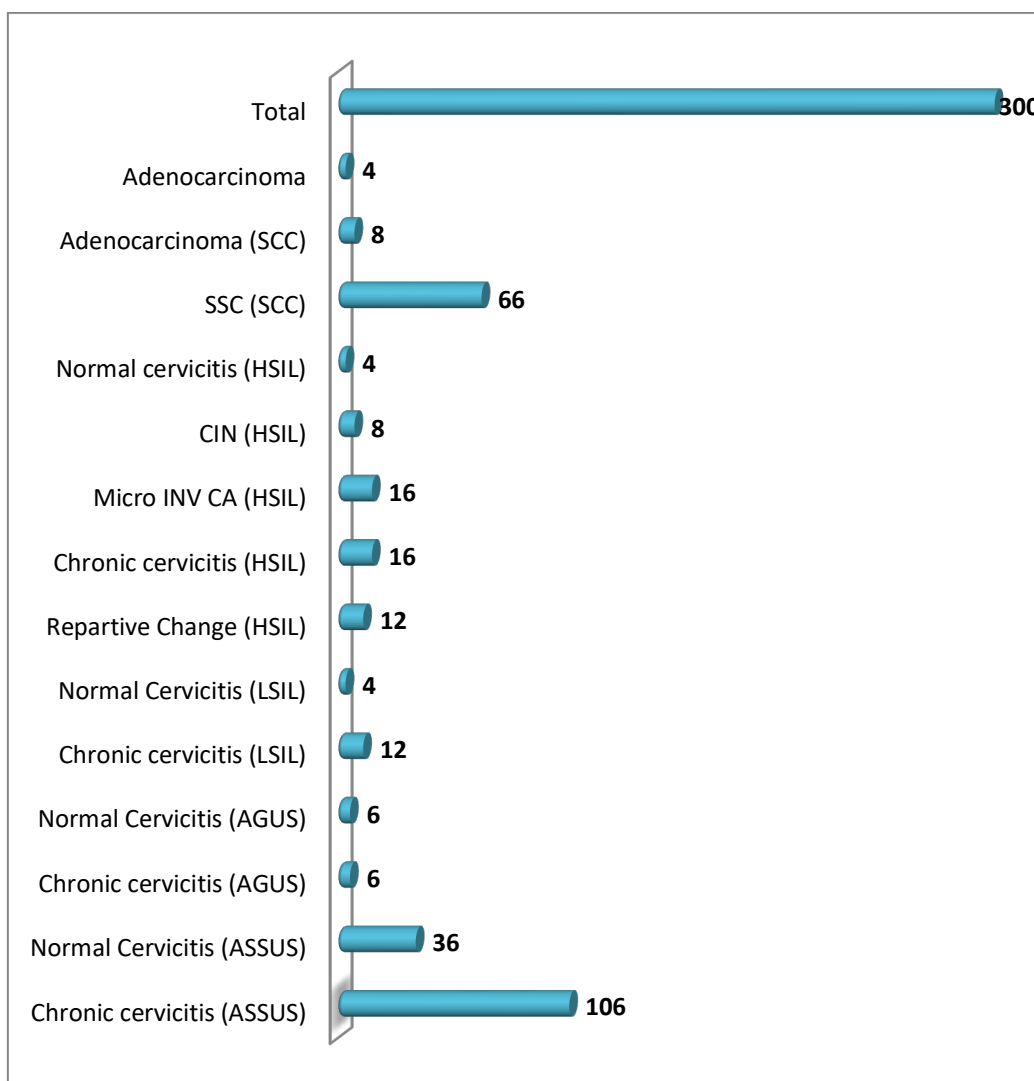


Figure 2: Cervical PAP smear and cervical biopsy histopathology

Discussion

Present perspective study of cervical PAP smear in the family of Telangana: chronic cervicitis 106 (35.6%) in ASSUS, 6 (2%) in AGUS, 12 (4%)

LSIL, 12 (4%) reparative change, 16 (5.33%) chronic cervicitis, 16 (5.33%) micro, INV CA, 8 (2.66%) CIN, in HCIL, 66 (22%) SSC, 4 (1.33%)

adenocarcinomas in SCC: the observed present findings are more or less in agreement with previous studies [5,6,7].

The prevalence of abnormal tissue inflammation (dysplasia) is often associated with multi-parity or parity women [8]. Women exposed to sexual intercourse at an early age are at greater risk of dysplasia. Hence, the ideal age for the first coitus must be 22–23 years [9]. It is reported that Muslim women are less prone to any cervical infection or cancer as compared to non-Muslim women because Muslim men are circumcised and carry the least infection during coitus [10].

The majority of the women studied in the present study belonged to middle socio-economic status and were unaware of hygiene. During menstruation, they used dirty clothing, which increased their risk of infection.

LSIL (low-grade squamous intra-epithelial lesion) is associated with intra-menstrual and post-coital bleeding, and HSIL (high-grade squamous intra-epithelial Lesion) is observed in post-menopausal women, which is treated as a bad sign because it is an indication of cervical cancer. However, cervicitis is the most common finding in PAP smears in reproductive women [11]. Various screening tests for cervical PAP smears, liquid PAP cytology, and automated cervical screening techniques Lugol's Iodine and acetic acid application, speculoscopy, and cervicography can be used for the early detection of pre-malignant lesions.

Summary and Conclusion

Present study of cervical PAP smear in the Telangana female population. The cervical PAP smear screening is for early detection of pre-malignant and malignant lesions of the cervix. As it is cost-effective and affordable to the middle socio-economic population as well, but this study demands further genetic, environmental, nutritional, patho-physiological, and hormonal studies because the exact pathogenesis of cervical cancer is still unclear.

Limitation of Study

Due to the remote location of the research centre, the small number of patients, and the lack of the latest techniques, we have limited findings and results.

- This research study was approved by Mahavir Medical College and Hospital, Vikarabad, Telangana, 501101.
- There is no conflict of interest.
- Self-Funding.

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