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Original Research Article

Pattern of cervical papsmear cytology- Our experience

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ABSTRACT

Background: In developing countries like India, the burden of cervical cancer is still high. According to the World Cancer statistics, >80% of all the cervical cancer cases are found in developing and low-resource countries, because of a lack of awareness. Apart from diagnosing cervical cancers pap test also aids in the diagnosis of inflammatory conditions.

Materials and Methods: This is a retrospective study carried out at A.C.S Medical college and hospital, Chennai during January 2018- to June 2019. Total of 892 pap smears are included in the study. Both endocervix and ectocervix were sampled. Immediately slides were fixed in 95% ethyl alcohol and subsequently stained by PAP and Hand E stains. Stained slides are mounted with DPX and reported by Pathologist according to Bethesda system. The data was collected and analysed statistically.

Results: A total of 892 pap smears are included in the study. Out of which, 701 smears were found to have pathology accounting for 78.5%. 396 smears were found to be inflammatory accounting for 56.4%.ASCUS, AGUS and HSIL were accounting for 11.9%, 9.4% and 2.4% respectively.

Conclusion: We can conclude Pap test is a simple, cost effective tool in the diagnosis of Inflammatory, Premalignant and Malignant lesions of cervix. Awareness and screening programmes have to be done effectively which helps in detection of premalignant lesions and reduce the incidence of cervical cancer.

1. Introduction

In developing countries like India, the burden of cervical cancer is still high. According to the World Cancer statistics, >80% of all the cervical cancer cases are found in developing and low-resource countries, because of a lack of awareness.[1] Every year, 122,844 women in India are diagnosed with cervical cancer, and 67,477 women die from the disease.[2] Pap test is a simple cost effective test. Pap smear involves collection of exfoliated cells from the cervix onto glass slides which are processed in the laboratory and examined for the presence of cervical premalignant cells.) HPV is sexually transmitted oncogenenic virus and plays a key role in development of cancer.[3,4] The introduction of cytological screening by George Papanicolaou in the late 1940s was a great public health success story in cervical cancer prevention.[5] Apart from diagnosing cervical cancers pap test also aids in the diagnosis of inflammatory conditions. Cervical cancer is a preventable disease. Conducting camps, creating awareness, motivating people to attend screening camps will help in diagnosing early cancer lesions. Annual screening is recommended from the age of 21 years till three consecutive negative results before lengthening the screening interval depending on the risk group of the woman. The US Preventive Services Task Force and the American Cancer Society now recommends cytological screening every 3 years starting from age 21 but not lower.[6,7] According to National Cancer Registry

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Program of India, cancers of uterine cervix and breast are leading malignancies seen in Indian women.[8] Sensitivity and specificity of pap smear screening is 50-75% and 90 -99% respectively.[9] If precancerous stages are identified early and treated it is a preventable disease.[10]

2. Materials and Methods

This is a retrospective study carried out at A.C.S Medical college and hospital, Chennai during January 2018 to June 2019. Total of 892 pap smears are included in the study. Smears are taken by a medical professional by using modified ayers spatula which was inserted and rotated over 360 degrees. Both endocervix and ectocervix were sampled. Immediately slides were fixed in 95% ethyl alcohol and subsequently stained by PAP and Hand E stains. Stained slides are mounted with DPX and reported by Pathologist according to Bethesda system.

2.1. Inclusion criteria

1. Age above 20yrs
2. Women with leucorrhea and abnormal bleeding per vagina

2.2. Exclusion criteria

1. Unsatisfactory smears
2. Women with menstrual bleeding

3. Results

A total of 892 pap smears are included in the study, Out of which 31 smears were found to be unsatisfactory accounting for 3.4%.160 smears were found to be normal on screening.

Pattern of distribution of pap smear is shown in Table 1. Out of 892 pap smears, 701 smears were found to have pathology accounting for 78.5%., 396 smears were found to be inflammatory accounting for 56.4%., ASCUS, AGUS and HSIL were accounting for 11.9%,9.4% and 2.4 respectively. Abnormal pap smears are shown in Table 2. No Malignancy was recorded in our study. In our study youngest women was 24 years and the oldest women was 67 years. All the pap smears reported in the age group of 20-30 were inflammatory. Atrophic smears were predominantly noted in the 50-60 year age group. ASCUS and AGUS were mostly seen in the age group of 50-60. Total 17 HSIL were reported and majority are seen in age group of 50-70 years.

Table 1: Pap smear distribution

Unsatisfactory	**31**	**3.4**
Normal	160	17.9
Abnormal	701	78.5

Table 2: Distribution of abnormal sample age wise

Age group (years)	**Total no. of inflammatory papsmears**	**Atrophy**	**ASCUS**	**AGUS**	**HSIL**
20-30	180	-	-	-	-
31-40	63	-	15	12	-
41-50	63	39	19	16	3
51-60	43	69	38	21	9
61-70	47	30	12	17	5
Total	396	138	84	84	17

Table 3: Percentage of abnormal papsmears

Pap smear report	**Total no. of Papsmears**	**Percentage%**
Inflammatory	396	56.4
Atrophy	138	19.6
ASCUS	84	11.9
AGUS	66	9.4
HSIL	17	2.4

4. Discussion

Many studies have shown cervical screening by pap smear is the best technique to diagnose premalignant and malignancies of cervix. With regular follow up and management the incidence and mortality due to cervical cancer have reduced. In our study, 17 HSIL cases were reported accounting to 2.4%. Out of 17 cases, 9 cases were reported in the age group of 51- 60yrs. Vaghela et al. reported 5% of HSIL in their study.[11] In the present study most common reported smears were inflammatory smears accounting for 54%. Inflammatory smears are commonly seen in 20-30 years of age group accounting for 25.6% in the present study. A study by Thushar K. et al showed 53% NILM with nonspecific inflammation.[12] ASUS constituted for 11.9% in our study. In study by Bamanikar et al. ASUS accounted for 2.32%.[13] AGUS in our study was accounting to 9.4% not in concordance with the incidence of AGUS in Mandakini et al. with only 0.2%.[14]

5. Conclusion

We can conclude Pap test is a simple, cost effective tool in the diagnosis of Inflammatory, Premalignant and Malignant lesions of cervix. Women above the age of 30yrs are recommended for regular cervical screening every year and women with epithelial abnormalities are advised for close follow up and colposcopic biopsies. Awareness and screening programmes have to be to be done effectively which helps in detection of premalignant lesions and reduce the incidence of cervical cancer.

6. Source of Funding

None.

7. Conflict of Interest

The authors declare no conflict of interest.

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