

Short Communication

Evaluation of cervical smear in high risk women

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ABSTRACT

Background: Objectives of current study were (i) To find out the pattern of cervical smear in females having risk factors. (ii) To observe the relationship between abnormal cervical smear with high risk factors.

Methods: A cross-sectional descriptive study was carried out in the department of obstetrics and gynecology, Guwahati medical college & hospital from July 2009 to August 2010 with the help of Pathology department. 200 women attending gynecological OPD with associated risk factors were selected at random. Detailed history, demographic information, contraceptive history and coital history were taken. Smear was taken from endocervix with the help of Ayer's spatula or cytobrush.

Results: Out of 200 cases, in 110 (55%) the smear was reported negative for malignancy. 73(36.5%) had an inflammatory smear, 11 (5.5%) had CIN, 1(0.5%) had malignancy and 5(2.5%) the smear was inadequate for cytological examination. In the study mean age of Cervical Intraepithelial Neoplasia (CIN) was 42.64 ± 6.34 years. Low socio-economic status, high parity & the use of oral contraceptive pills were major risk factors.

Conclusion: Cervical smear should be routinely used as a reliable diagnostic aid for early detection carcinoma cervix especially in high risk cases. The need of the hour is to create awareness and easy accessibility to proper screening.

Keywords: Cervical smear, High risk women, Pap smear

INTRODUCTION

Cancer cervix is an important public health problem. Worldwide, cervical cancer comprises approximately 12% of all cancers in women. It is the second most common cancer in women in the world after breast cancer but the commonest in developing countries.¹ Cancer of the cervix has been the most important cancer in women in India over the past two decades.² The burden of cervical cancer in India is enormous accounting for about 20 per cent of all cancer related deaths in women and is the number one cause of death in middle aged Indian women. The Pap smear is one of the modern success stories in the field of preventive medicine which detects cervical smear in its early stage. In 1943, Dr. George

Papanicolaou introduced this technique.³ All sexually active women between 20-60 years should have cervical smear every 3 years as it detects premalignant lesion.⁴

With this background, the present study was conducted to enlist the outcome of cervical smear in patients attending Gynecological out-patient department & to identify risk factors in abnormal smear.

Aims & objectives

Present study aims at:

- 1) To undertake cervical smear study in females having risk factors.

- 2) To find out the pattern of cervical smear.
- 3) To observe the relationship between abnormal cervical smear with high risk factors.

METHODS

This cross-sectional study was conducted in the department of obstetrics and gynecology with the help of pathology department, Gauhati medical college & hospital, Guwahati from July 2009 to August 2010. Prior to collection of data, ethical clearance was taken from institutional ethical committee. A total of 200 cases were taken, who attended gynecology outpatient department of Gauhati medical college. The cases were selected on the basis of following risk factors: early marriage, early intercourse, early pregnancy, multiparity, increased frequency of child birth, oral contraceptive pill users, multiple sex partners, smoking, human papilloma virus infection, immunocompromised women (HIV positive), Husband's first wife died of carcinoma cervix & patients with unhealthy cervix i.e. cervical erosion, chronic cervicitis irrespective of age and parity.

Informed consent was taken from all the patients after assuring confidentiality. Detailed history was taken and thorough clinical examination done. After that smear was taken from exo & endocervix with the help of Ayer's spatula or cytobrush & fixed with 95% ethyl alcohol. Socio-economic status was categorized on the basis of modified Prasad's scale taking consideration of consumer price index for 2010.⁵

Exclusion criteria

Those who manifest cervical cancer, visible cervical lesion/ulcer, active bleeding, infective discharge, pregnancy

RESULTS

Out of 200 cases, 110 cases (55%) were negative for malignancy (Within normal limit), 73 cases (36.5%) were inflammatory, 7 cases (%) were having LGSIL & 4 were HGSIL, 1 had malignancy & 5 cases (2.5%) were inadequate for evaluation. Mean age of Cervical Intraepithelial Neoplasia (CIN) was 42.64 ± 6.34 years. Majority of women diagnosed as CIN were between 35-55 years of age.

Table 1: Findings of cervical smear.

Smear findings	No. of cases (%)
Inadequate for evaluation	5 (2.5%)
Inflammatory	73 (36.5%)
Negative for malignancy	110 (55%)
LGSIL	7 (3.5%)
HGSIL	4 (2%)
Squamous cell carcinoma	1 (0.5%)
Total	200

Table 2: Distribution of positive findings in relation to high risk factors.

Risk factors	No. of cases (%)
Age at marriage	
<18 years	7 (58.4%)
18-25 years	4 (33.3%)
>25 years	1 (8.3%)
Parity	
Nullipara	2 (16.7%)
Parity 1-3	4 (33.3%)
Parity ≥ 4	6 (50%)
Contraceptive methods	
OCPs	10 (83.3%)
IUCD	2 (16.7%)
Socio-economic status	
Lower class	11 (91.7%)
Middle class	1 (8.3%)
Upper class	0

DISCUSSION

There is strong association between cervical cancer and HPV. As the facility of detecting HPV is not readily available in under-developed countries like India the next best and reliable method is cervical smear. In this study, low socioeconomic status was the most frequent risk factor. This is comparable to the study conducted by Engelstad LP et al. in 2001 in California which showed that low income women were at higher risk of developing cervical cancer.⁶ Regarding parity, it was seen that 6 out of 12 women who were diagnosed with CIN had more than four children. This study is comparable to other studies by Sawaya GF et al. in 2001 which show that high parity is a risk factor for cervical neoplasia.⁷

In the present study, 10 (83.3%) out of 12 positive cases were using oral contraceptive pills & the similar findings were reported by Moreno V et al. that Long-term use of oral contraceptives could be a cofactor that increases risk of cervical carcinoma by up to four-fold in women who are positive for cervical HPV DNA.⁸ Early onset of sexual activity is also a risk factor. In this study it was found that out of 12 cases of CIN, 7 women were less than 18 years at the time of marriage. A study carried out by Cyrus- David MS et al. in 2002 in Houston, USA suggested that age at first sexual intercourse less than 18 years carried a high risk for developing CIN.⁹

CONCLUSION

The study of changes in cellular morphology has a great role to diagnose the disease in its early stage. If we can overcome minor hurdles & can perform regular screening programme, we can detect most cases of cancer cervix at early stage. At present most cases are detected late resulting in high mortality due to cancer cervix. The Pap smear collection technique is very easy, less time

consuming, carried out as OPD procedure and requires few instruments. The need of the hour is to create awareness and easy accessibility to proper screening.

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Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

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