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PJBS

ISSN 1028-8880

**Pakistan
Journal of Biological Sciences**

ANSI*net*

Asian Network for Scientific Information
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

Assessment of Cervical Erosion in Hamedan City, Iran

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Abstract: The purpose of this study was to determine the role of socio-economic factors and cytology in cervical erosion. A cross-sectional study involving 410 females in the reproductive age group was conducted in urban health centers in Hamedan city, Iran. Data were collected through interviews with women, gynecological examination in the clinics in the health centers and laboratory tests. Cervical erosion was detected in 68 (16.6%) females. Out of these mild dysplasia was seen in (8.8%) females. High percentages of inflammatory smears (58.8%) were obtained in women with cervical erosion. Cervical erosion was more common in illiterate and women with low literacy status as compared to women with higher education. Majority of cases of cervical erosion were detected in women with high parity. A statistically significant relationship was found between lower socio-economic status and cervical erosion ($p < 0.05$). Regular cytological screening by Pap smear will help in early detection of carcinoma cervix.

Key words: Cervical erosion, cytology, socio-economic factors, Iran

INTRODUCTION

The health of women in society is neither a new issue nor a fully settled one. Infact, the origin of female disadvantages lies in the discriminatory treatment towards women in the allocation of life-saving resources such as food and health care (Latthe *et al.*, 2006).

Gynecological health is an important component of any women's health status. Social factors play a vital role for the occurrence of certain gynecological diseases (Garcia-Moreno and Turmen, 1995).

Hence, a study of these factors, influence of these factors in the causation of disease would be crucial for the prevention of various gynecological problems.

Cervical erosion is a common finding on routine pelvic examination during the fertile years. It is a true epithelial defect that can be produced by trauma, inflammation or by carcinoma. The naked eye evaluation of such cases is deceptive and it is easy to dispose of the intraepithelial cancer precursors as simple cases of erosion or inflammation. Since lesions of the cervix such as chronic, erosions and lacerations are predisposing conditions or malignancy of the cervix, it is of paramount importance to detect these lesions early enough and treat them adequately if cancer of the cervix is to be warded off (de Oliveria *et al.*, 2006).

The objectives of this study were to determine the prevalence and role of socioeconomic factors in cervical erosion and also the cytological findings in reproductive age group women.

MATERIALS AND METHODS

A descriptive and cross-sectional study was carried out in the community adopted by urban health centers, Hamedan City, Iran. The method of sampling was quota sampling, which was done during a certain period of time. A total of 410 females in reproductive age group were studied. Data collection was on the base of questionnaire and gynecological examination. Detailed history, clinical examination and gynecological examination i.e., per speculum and per vaginal examination were done in all the women. Cervical smear for cancer cytology was taken by Papanicolaous method. The smears were fixed immediately in 95% ethyl alcohol and transported to Central Department of Pathology for reporting.

Percentage, χ^2 -test, were performed by using the SPSS 10.0 package.

RESULTS

Most women (49.5%) were within 25-34 years. Majority of women (42.7%) were in secondary level and

Table 1: General characteristics of the subjects (n = 410)

Characteristic	Value (%)
Age (year)	
<25	14.5
25-34	49.5
35-45	36.0
No. of deliveries	
0	7.3
1-2	25.6
3-5	51.3
≥ 5	15.8
Educational status	
Illiterate	11.0
Primary	17.1
Secondary	42.7
Graduate	29.3
Occupational status	
Housewife	63.7
Employed	36.3

Table 2: Cytological pattern in females with cervical erosion (n = 68)

Cytological pattern	(%)
Normal	26.5
Inflammatory	58.8
Dysplasia	
Mild	8.8
Moderate	5.9

Table 3: Frequency of cases of cervical erosion according to parity (n = 68)

Parity	Cervical erosion (%)
Nulliparous	-
1	7.3
2	14.7
3	26.5
≥4	51.5

Table 4: Relationship between socio-economic status (Prasad's classification, 1991) and cervical erosion (n = 410)

Socio-economic	Cervical erosion (%)	
	Yes	No
Low and medium	48 (11.7)	200 (48.8)
High	20 (4.9)	142 (34.6)
Total	68	342

Figures in parentheses represent percentages; $\chi^2 = 35.5$, $df = 1$, $p < 0.05$

(63.7%) were housewives. About half of women surveyed had 3-5 children and (84.8%) of women were using contraception (Table 1).

On per speculum examination, cervical erosion was found in 16.6%. This shows that it is common in women of fertile age. Symptoms such as leucorrhoea, lower abdominal pain and backache were more common in women with cervical erosion, 54.7, 14.4 and 58.0% respectively, as compared to dyspareunia 4.6% and post coital bleeding 0.9%.

Out of 410 smears, 46.3% had normal smears, 51.3% had inflammatory smears while 2.4% had dysplastic changes. The cytological pattern in women with cervical erosion is shown in Table 2. Out of the 68 cases of cervical erosion, 14.7% were dysplasia. High percentages of inflammatory smears (58.8%) were obtained in women

with cervical erosion. Cervical erosion was more common in females who were illiterate and women with low literacy status (61.5%), as against females who had higher education (38.5%).

It was observed that majority of case of cervical erosion (51.5%) were found in women having more than four children (Table 3).

Cervical erosion was found common in women belonging to low and medium socio-economic groups as compared to females belonging to high socio-economic group ($\chi^2 = 35.5$, $p < 0.05$) (Table 4). Mucopurulent cervical discharge also was not seen in any woman.

DISCUSSION

High percentage of inflammatory smears in females with cervical erosion (58.8%) could be due to presence of vaginitis and cervicitis in these women. The changes in the PH of the vagina may lead to cervical erosion in these women. These results confirm previous report (Deeb *et al.*, 2003; Deeb, 1997; Bang *et al.*, 1999).

Jajoo and Ranade (1991) reported 13.3% dysplastic smears in cases of cervical erosion, which is slightly lower than that found in the present study (14.7%).

The incidence of grades of dysplasia in cervical erosion was reported to be 18.6%, by Ghasemi and Hoseini (1998), which is quite higher than that found in the present study. Thus women with cervical erosion from risk group for dysplasia, which may lead to cervical malignancy. Hence, there is need for regular screening by Pap smear in this group.

Highly significant association between lower socio-economic status and occurrence of cervical erosion ($p < 0.05$) could be as the socio-economic status of the individual can be directly correlated with the general hygienic standard of the patients. Also, women in lower socio-economic status tend to marry earlier and have their child at a young age. This may lead to changes in cervical epithelium cervical erosion (de Oliveria *et al.*, 2006).

Majority of cases of cervical erosion (51.5%) in women with high parity could be attributed to cervical trauma, which may occur due to multiple pregnancies at short intervals.

Our finding showed none case for transmitted disease. With the exception of two studies in Bangladesh and turkey (Hawkes *et al.*, 1999; Bulut *et al.*, 1997), our results showed prevalence of infection much lower than those cited in other developing countries (Donegan *et al.*, 2006). The population of Hamedan city did not exhibit many of the risk behaviors known to be associated with transmitted disease.

In conclusion, these results indicate that socio-economic factors, which play a vital role for the occurrence of cervical erosion, are lower socio-economic status, illiteracy and low literacy status and high parity. Women with cervical erosion should undergo regular cytological screening as they form risk group for dysplasia, which may lead to cervical malignancy.

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