

# CLINICOPATHOLOGICAL STUDY OF EROSION OF CERVIX

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## Introduction

From many points of view, the cervix occupies a pivotal place in the practice of gynaecology. Exfoliative cytology has now passed the experimental stage and its value in the early diagnosis of cancer cervix has been well established. However, its sensitivity for diagnosis of inflammatory lesions of cervix is not very definite (Domadia and Vaidya, 1974). There is increasing evidence that epithelial abnormalities like epithelial dysplasia precede preinvasive cancers (Wahi *et al* 1969). These changes may progress to invasive cancer after a length of time (Carter *et al* 1956). Since typical cellular changes are found in chronic cervicitis, erosion and unhealthy cervix (Mali *et al* 1969; Langley, 1975) it was considered imperative to diagnose and treat these conditions early, if carcinoma of the cervix was to be prevented.

## Material and Methods

Two hundred and forty cases of erosion of cervix in non-pregnant women were studied from outdoor and indoor wards of U.I.S.E. Maternity Hospital and also from other private clinics over a period

of 2 years. Complete history and clinical examination were done in each case. The cytological and histological diagnosis was made according to the criterion of WHO (1973) and Novak and Woodruff (1967).

## Observations

The most common symptoms were white vaginal discharge and backache, 50.8% and 28.3% respectively. We also studied the incidence of erosion in the various socio-economic groups and observed that it was highest in group V (income below Rs. 30 per capita per month) and lowest in group II (below Rs. 151 to 300 per capita per month) being 51.2% and 2.5% respectively.

Cytological smears were studied in all the 240 cases, but biopsy was done in only 180 cases. Out of 180 cases, histopathological correlation could be established in 120 cases because in the remaining 60 cases cervical epithelium was not seen.

Clinically, cervical erosion was divided into small, moderate and large varieties and 25% were small, 53.3% moderate and 21.6% large erosions in this series.

Table IV-A Histological Diagnosis in 180 Cases of Cervical Erosion. Table IV-B Cytological Diagnosis in 60 cases of Cervical Erosion in Which Epithelium was not Seen Histologically.

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TABLE I  
Age and Age at First Coitus With Erosion

Age	Erosion		Age at first coitus	Erosion	
	No.	%		No.	%
Below 20 years	10	4.1	Below 20 years	131	54.6
21-30	58	22.5	21-25	94	39.1
31-40	112	46.6	26-30	15	6.1
41-50	51	21.1	31-35	—	—
51-60	9	3.7	36-40	—	—
Total	240			240	

TABLE II  
Age at First Pregnancy and Parity With Erosion

Age at first pregnancy	Erosion		Parity	Erosion	
	No.	%		No.	%
Below 20 years	139	57.9	Nulliparous	9	3.7
21-25	76	31.6	1-2	25	10.4
26-30	16	6.6	3-4	106	44.1
31-35	—	—	5-6	100	41.6
36-40	—	—	7 and above	—	—
Not conceived	9	3.7	—	—	—
Total	240			240	

TABLE III  
Cytological Diagnosis in 24 Cases of Cervical Erosion

Cytological diagnosis	No. of cases	Percentage
Chronic cervicitis	98	40.8
Inflammation with dysplasia		
Grade I	88	36.6
Grade II	26	10.8
Grade III	7	2.9
In situ carcinoma	6	2.5
Invasive carcinoma	2	0.83
Non-inflammatory non-dysplastic simple erosion	13	5.4
Total	240	

### Discussion

Majority of the cases (46.6%) of erosion were found in the age group of 31-40 years. Maximum number of cases (54.6%) were found among the patients who had first coitus before the age of 20 years. Talib *et al* (1978) have also re-

corded similar findings. It is interesting to note that grades I and II of dysplasia are also common in the age group of 31-40 years and that the incidence of dysplasia and carcinoma cervix both is highest in those patients who had their first coitus before the age of 20 years. (Talib *et al* 1978; Wahi *et al* 1969). First pregnancy



A			B		
Histological diagnosis in 180 cases	No.	%	Cytological diagnosis in 60 cases	No. of cases	%
— Epithelium not observed	60	33.3	Simple erosion	4	6.6
— Chronic cervicitis	25	13.8	Inflammation	30	50.0
— Dysplasia Gr. I	58	32.2	Dysplasia Gr. I	10	16.6
— Dysplasia Gr. II	6	3.3	Dysplasia Gr. II	16	26.6
— Dysplasia Gr. III	6	3.3			
— In situ Carcinoma	4	2.2			
— Invasive Carcinoma	2	1.1			
Total	180		Total	60	

below the age 20 years was also found to be associated with highest number of cases of cervical erosion (57.9%). Similar correlation has been found between dysplasia and carcinoma cervix (Wahi *et al* 1969). 44.1% cases of erosion were found in Para 3-4 women. Similarly, dysplasia and carcinoma of cervix are more common in high parity women (Luthra 1970; Richart and Berron, 1971). Thus it has been observed that age at the time of first coitus and first pregnancy and multiparity are common denominators which seem to play some role not only in increasing the incidence of erosion but also dysplasia, carcinoma in situ and carcinoma cervix.

Leucorrhoea and backache (50.8% and 28.3%) were the commonest clinical symptoms in the present series. Sunanda Bai *et al* (1968) have reported leucorrhoea in 76.5% of their cases.

Unfortunately, cytology alone is not a diagnostic means for cervical erosion but finding of large number of endocervical cells in the scrappings taken directly from erosion are highly suspicious of the diagnosis, otherwise the picture is that of inflammation (Watchel, 1969). The pre-malignant or malignant changes in the cervical epithelium were studied by cytology.

Incidence of grades I, II and III of dys-

plasia in erosion was 36.6%, 10.8% and 2.9% respectively (Total of 50.3% of all types of dysplasia), whereas Chakravarti *et al* (1974) have reported an incidence of 37% of dysplasia in his series of erosion. Domadia and Vaidya (1974) have reported their incidence to be 84% which is comparatively a very high figure. We have observed the incidence of in situ and invasive carcinoma in erosion cases to be 2.5% and 0.8% respectively. Joshi (1972) has reported these incidences to be 2% and 1% respectively. Chakravarti *et al* (1974) have found these incidences to be 16% and 35% for in situ and invasive carcinoma respectively. Domadia and Vaidya (1974) have also reported a very high incidence of cases suspicious of malignancy and those positive for malignancy viz. 73% and 45% respectively. Dixit and Virkar (1971) have not reported even a single case of in situ or invasive carcinoma in their cases of erosion.

In the present series, correlation between cytology and histology was 100% as regards severe dysplasia, in situ carcinoma and invasive carcinoma. But disparity was observed in 9 cases of inflammation and 7 cases of moderate dysplasia. (Table V). Nine cases cytologically diagnosed as inflammation showed

TABLE V  
Cytohistological Correlation in 120 Cases

Cytological diagnosis	No. of cases	%	Inflam- mation		Dysplasia I		Histological diagnosis		Dysplasia III		In situ Carci- noma		Invasive Carci- noma	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Inflammation	38	31.6	29	76.3	9	23.7	—	—	—	—	—	—	—	
Dysplasia I	59	49.1	—	—	59	100.00	—	—	—	—	—	—	—	
Dysplasia II	11	9.1	—	—	4	36.3	7	63.6	—	—	—	—	—	
Dysplasia III	6	5.0	—	—	—	—	—	—	6	100.0	—	—	—	
In situ Carcinoma	4	3.3	—	—	—	—	—	—	—	—	4	100.0	—	
Invasive Carcinoma	2	2.0	—	—	—	—	—	—	—	—	—	—	2	
Total	120		29		72		7		6		4		2	

mild dysplasia on histology, whereas 7 cases of moderate dysplasia diagnosed cytologically showed only dysplasia on histological examination. This lack of correlation may be due to error both in collecting sample for cytology as well as tissue for histology. The material for cytology should be taken from the area of erosion precisely, whereas cone biopsy or biopsy after colposcopic examination may be the solution to such errors (Ortiz *et al*, 1969).

#### Summary

Two hundred forty cases of cervical erosion in non-pregnant women were studied clinically, by cytology and histology in order to detect the incidence of dysplasia, in situ and invasive carcinoma in them. Highest incidence was found between 31-40 years in multiparous women. Age at first coitus and first pregnancy and socio-economic status have been found to have an important bearing in the incidence of erosion of cervix as they have in case of dysplasia and carcinoma servix. The incidence of severe degree of dysplasia, carcinoma in situ and invasive carcinoma was 2.9%, 2.5% and 0.83% respectively and in these groups 100% correlation was present between Cytology and Histological findings.

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