

VAGINAL CYTOLOGY IN EROSION OF CERVIX AND CERVICITIS

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SUMMARY

Present study has been carried out in five hundred females having erosion of cervix or cervicitis for early detection of Cancer Cervix and pre-cancerous conditions by vaginal cytology. In most of the cases biopsy of cervix was done to confirm the diagnosis histologically, 12.6 per cent cases had different types of dysplasias and 1.6 per cent had malignant smears. No case of Carcinoma in situ was found. Maximum number of moderate dysplasia (14.28 per cent) and frank malignancy (14.28 per cent) were present in the age group of 55 years and above. Severe dysplasia (1.39 per cent) and malignant smears (1.71 per cent) were maximum in women whose duration of married life was more than 10 years. Severe dysplasia (1.91 per cent) and malignancy (2.39 per cent) were maximum in grand multipara. No case of malignancy was found in cases using copper-T, Oral pills or Condom. Malignancy was present in 1.52 per cent cases of erosion cervix, 2 per cent cases of cervicitis and 6.67 per cent cases of erosion with cervicitis. Treatment and followup for dysplasia could possibly prevent a number of malignancies in future.

Introduction

An increase in longevity in the population has been paralleled by an increasing incidence of malignancy. Carcinoma of the cervix is the commonest malignancy of the female genital tract. Various studies in the recent past have established that vaginal cytology is the simplest, fairly accurate, inexpensive and quick method of detecting the pre-malignant and malignant lesions of the cervix uteri in mass.

The study of exfoliative cytology as a means of detecting early cancer of the

cervix, first mentioned by Dudgeon and Patrik (1927), is popularly associated with the names of Papanicolaou and Traut (1943).

Material and Methods

For the present study five hundred cases with cervical erosion or cervicitis or chronic vaginal discharge were collected from indoor and out-patient department of Obstetrics and Gynaecology of Nehru Hospital, B.R.D. Medical College, Gorakhpur.

A detailed clinical history was taken with particular reference to age, parity and marital status including age at first

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coitus and frequency of coitus. General and systemic examination was carried out. A detailed obstetrical history was also taken. Symptoms like vaginal discharge, history of contact bleeding and use of any family planning method were noted. Vaginal smears were taken, fixed and stained by standard Papanicolaou's technique. Cervical biopsy was done in some cases with normal or inflammatory smears and in most of the cases with smears showing evidence of dysplasia or showing obvious clinical lesion. Staining of the sections were done by hematoxyline-eosin stain after fixing and standard processing.

The cervical smears have been classified into the following groups:

- I. Normal smear.
- II. Inflammatory smear.
- III. Mild dysplasia.
- IV. Moderate dysplasia.
- V. Severe dysplasia and carcinoma in situ.
- VI. Frank malignancy.

Dysplasias were classified as per W.H.O. classification (1973) given by G. Rietton and W. M. Christopherson in three categories, viz. mild, moderate and severe.

Table I shows the cases from which the material was collected and the cytological findings.

Observations

The age distribution of patients varied from 20 to 55 years and above. Dysplasias of different grades were more common in the age group of 40 to 44 years and malignancy was more common in the age group of 55 years and above.

TABLE I
Showing Gross Appearance of Cervix and Cytology Findings

Nature of cervical lesions (clinically)	Total No. of cases	I		II		III		IV		V		VI	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Erosion Cervix	395	310	78.40	30	7.57	41	10.38	4	1.01	4	1.01	6	1.52
2. Cervicitis	50	40	80.00	3	6.00	6	12.00	—	—	—	—	1	2.00
3. Erosion with cervicitis	15	3	20.0	4	26.67	2	13.33	3	20.0	2	13.33	1	6.67
4. Erosion with cervical tear	10	9	90.0	—	—	1	10.00	—	—	—	—	—	—
5. Erosion with hypertrophy of servix	30	29	96.67	1	3.33	—	—	—	—	—	—	—	—
Total	500	391		38		50		7		6		8	

Incidence of severe dysplasia (1.39 per cent) and malignant smears (1.71 per cent) were more in the group having married life of more than ten years. Different grades of dysplasias (16.74 per cent) as well as malignancy (2.39 per cent) were more common in grand multipara.

Majority of patients (48 per cent) were having per capita monthly income below Rs. 30.00 and maximum number (75 per cent) of malignant cases were also found in the same group. Majority of cases (80.4 per cent) were Hindus and maximum cases of mild dysplasia (10.69%), severe dysplasia (1.49 per cent) and frank malignancy (1.74 per cent) were present in them. 17.6 per cent cases were Muslims and malignancy was found in 1.13 per cent of them. Malignancy was found in 1.87 per cent among the (91 per cent) patients who were not using any contraceptive device. No case of malignancy was found in cases using copper-T, oral pills or condom.

Out of 50 cases of dysplasia grade I (cytologically) malignancy was present in 1 case histologically. Out of 6 cases of severe dysplasia (cytologically) malignant cells were present in the smear also showed malignancy on histopathology. All cases were squamous cell carcinoma. No case of adenocarcinoma was found.

Discussion

Different type of smears—

Normal smear—

In the present study 78.2 per cent had normal smears. Samuel and Sunanda Bai (1967) found normal smears in 98.4 per cent and Rao *et al* (1973) in 90.42

per cent. Mishra and Das (1979) reported in 76 per cent.

Inflammation or Hyperplasia

In our study the incidence of inflammation was 7.6 per cent. Dixit and Virkar (1971) found it in 2.9 per cent cases while Domadia *et al* (1978) reported it in 2.63 per cent cases and Mishra and Das (1979) in 5 per cent cases.

Mild and Moderate Dysplasia

In our study the incidence of mild dysplasia was 10 per cent. An incidence varying from 2.3 per cent to 7.5 per cent has been given by different authors (Mackey *et al* 1959, Wahi and Luthra 1969, Rao *et al* 1973 and Chakravarty *et al* (1976). This low incidence is due to the fact that they have done cytological study in all the cases attending gynaecological O.P.D. including cases with normal cervix. Rato *et al* (1973) reported 6.84 per cent, Panda and Behera (1977) 5.49 per cent, Patnaik and Mahapatra (1978) 9.73 per cent, Mishra and Das (1979) 15 per cent, and Shah and Shah (1980) 12.6 per cent cases of mild dysplasia. Panda and Behera (1977) reported moderate dysplasia in 2.36 per cent cases as compared to 1.4 per cent in our series.

Severe Dysplasia

The incidence of severe dysplasia was 1.2 per cent in the present study which is almost similar with findings of many workers like MacKey *et al* (1959), Wahi and Luthra (1969). Patnaik and Mahapatra (1978) and Ahuja and Reddy (1963). While Samuel and Sunanda Bai (1967) reported it in 0.48 per cent and Rao *et al* (1973) in 0.75 per cent.

TABLE II
Relation Between Parity and Cytological Findings

Parity	I		II		III		IV		V		VI		Total No. of cases
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Nullipara (0)	18	90.0	2	10.0	—	—	—	—	—	—	—	—	20
Multipara (1-4)	164	78.10	15	7.14	22	10.48	4	1.90	2	0.95	3	1.48	210
Grand Multipara (5 and above)	209	77.78	21	7.78	28	13.39	3	1.44	4	1.91	5	2.39	270

Frank Malignancy

In our study the incidence of malignancy was found to be 1.6 per cent. Ahuja and Reddy (1963) reported it in 1.33 per cent, Christopherson *et al* (1962) in 1.3 per cent, Maigregor and Baird (1963) in 1 per cent. Panda and Behera (1967) in 1.16 per cent and Shah and Shah (1980) in 0.67 per cent.

Cervical Lesions and Cytological Findings

In the present study out of 79 per cent cases of erosion of cervix 1.52 per cent had malignant smears. Sunanda Bai *et al* (1968) and Kroll (1970) had also reported similar findings. Panda and Behera (1977) found 2.74 per cent malignancy in unhealthy cervixes.

In the present series dysplasias of different grades were more common in the age group of 40 to 44 years and malignancy was more common in the age group of 55 years and above. The findings of Reagan *et al* (1955), Rao *et al* (1973) and Mishra and Das (1979) are almost similar with our findings.

The incidence of frank malignancy of the cervix was more in the patients who are married for more than 10 years. Similar findings were reported by Rao *et al* (1973).

In the present series no evidence of dysplasia or malignancy has been found in Nullipara. In multiparae the incidence of malignancy was 1.48 per cent. Shah and Shah (1980) reported malignant smears in 3.27 per cent and Rao *et al* (1973) in 0.37 per cent.

Relationship of cytology with histology is shown in Table III. The incidence of malignancy as reported by Singh *et al* (1983) is slightly higher than in our study, which may be due to the fact that

TABLE III
Comparison of Cytological Histological Findings

Group	No. of cases	Normal						Histological Diagnosis						Total No. of cervical biopsy
		No.	%	No.	%	No.	%	Chronic cervicitis	Epithelial hyperplasia	Dysplasia	Frank Malignancy	No.	%	
I	391	42	78.20	91.3	3	6.52	—	—	1	2.17	—	—	46	
II	38	4	7.60	50.0	2	25.0	1	12.5	1	12.5	—	—	8	
III	50	8	10.0	26.67	16	53.33	2	6.67	3	10.00	1	3.33	30	
IV	7	1	1.40	20.0	2	40.00	—	—	2	40.00	—	—	5	
V	6	—	1.20	—	1	16.67	—	—	3	50.01	2	33.34	6	
VI	8	—	1.60	—	—	—	—	—	—	—	8	100.00	8	

they have selected mainly cases of post menopausal age group and have done colposcopically directed biopsies whereas we have taken biopsy from suspected areas.

Exfoliative cytology has been found by far the most convenient and fairly reliable method for detection of early malignancy. Universal cytological screening of all sexually active women should be done especially in cases of parous women in lower socio-economic groups. Treatment and follow up for dysplasia cases could possibly prevent malignancies in future.

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