CYTOLOGICAL SCREENING FOR EVIDENCE OF CANCER CERVIX IN THE PRIMARY HEALTH CENTRES ATTACHED TO KURNOOL MEDICAL COLLEGE, KURNOOL (ANDHRA PRADESH)†

by

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Introduction

The role of Papanicolaous' smear as means of early detection of neoplastic changes has become increasingly important to the pathologist and gynaecologist. With its use, the progression of malignant change from dysplasia to invasive carcinoma has been demonstrated. Cancer of the uterine cervix is the most common malignant tumour among Indian women.

It has been stated by many that with the careful study of Papanicolaou smear, clinical carcinoma of the cervix will be markedly reduced in future. The aim of this paper is to review our experience with the routine use of the Papanicolaou smear in 1000 rural women, and to evaluate the possible approaches to the positive smear.

Material and Methods

The study was carried out under the reorientation of Medical Education Scheme in 6 Primary Health Centres attached to Kurnool Medical College, Kurnool (A.P). A total of 1000 cases were examined. Scrapings from portio vaginalis was obtained by means of Ayers' spatula and the smears were fixed immediately and later on stained by Papanicolaous' method.

Results

All the patients studied were married and aged 20 years or above. 70 per cent were in the age range of 30-40 years. Parity was high, being 3-6 in 65 per cent of the cases. The cases were correlated with the clinical appearance of the cervix (Table I).

TABLE I
Clinical Appearance of Cervix

S. No.	Clinical appearance	No. of cases	Percentage
1.	Healthy cervix	643	64.3
2.	Cervical erosion	260	26.0
3.	Unhealthy cervix	40	4.0
4.	Endocervicitics	30	3.0
5.	Hypertrophied cervix	16	1.6
6.	Growth of cervix	9	0.9
7.	Polyp	2	0.2
	Total	1000	100.00

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To facilitate and simplify the reports on cytological specimens Papanicolaou suggested a classification of all smears into 5 categories and we followed the Papanicolaous' classification (Table II).

TABLE II
Papanicolaous' Classification of Smears

Age in Decades	Class I	Class II	Class III	Class IV	Class V	Total
20-30	178	172	—	—	—	350
31-40	172	215	—	1	—	388
41 50	101	84	—	—	1	186
51-60	61	15	—	—	—	76
Total	512	486	—	1	1	1000

Class-I and II denote 'Negative Smears'.
Class-III 'Suspicious' and Class-IV and V 'Positive Smears'.

Dysplasia was seen in 40 (4.0%) of cases (Table III).

TABLE III
Different Grades of Dysplasia

Type of Dysplasia	No. of cases
Mild Dysplasia	11
Moderate Dysplasia	26
Severe Dysplasia	3
Total	40

Carcinoma in situ was seen in 1 case and invasive carcinoma in 1 case. The percentage of abnormal smears in 1000 patients was 4.20%.

Table IV demonstrates the mean age of the patients in each diagnostic category.

Mean age of patients in dysplasia group was 28 years. This emphasizes the importance of annual cytologic smear in the young patients.

TABLE IV
Mean Age of Patients with Neoplasia

S. No.	Diagnosis	Age in years
1.	Mild and moderate dysplasia	28
2.	Severe dysplasia	30
3.	Carcinoma in situ	33
4.	Invasive carcinoma	50

Discussion

A total of 1000 cases were examined cytologically. The incidence of dysplasia of all grades of severity was 4.0%. An incidence varying from 2.3% to 7.5% has been given by different authors (Wahi *et al* 1969; Rao *et al* 1973; Chakravarty 1976 and Jamila *et al* 1980). Among the 40 cases of dysplasia, 37 belonged to the mild and moderate variety. Only 3 cases had smear pattern of severe dysplasia.

Correlating the age of patients and dysplasia, the mean age was found to be 28 years in mild and moderate dysplasia and 30 years in severe dysplasia. Herbert *et al* (1976) and Jamila *et al* (1980) are almost consistent on the point that the mean age of moderate dysplasia was 26 years and severe dysplasia 27 years.

As far as the significance of cytological atypicality is concerned, varying reports are available in the literature. Nelson and Hall (1968) consider atypical smears benign and simply recommended periodic repeats at 12 month intervals. In contrast Herbert *et al* (1979) on analysis of

atypical smears have continued to find cases of carcinoma in situ. In 10% of the patients with carcinoma in situ having an initial atypical smear, a repeat smear progressed to a higher level of abnormality. It is increasingly evident that a persistent atypical smear requires tissue for adequate histologic evaluation. Figg *et al* (1970) reports that one sixth of their cases of cancer were found in patients with atypical smear.

Chakravarthy *et al* (1976) report that 43.47% of severe dysplasia progressed to either carcinoma in situ or invasive carcinoma.

On analysing the cytological pattern in different clinical conditions of cervix, it was found that the highest incidence of abnormal smear was seen in clinically suspicious or unhealthy and bad cervical erosion. Out of 40 cases of dysplasia, 29 were found in cervical erosion, 8 in unhealthy cervix, 2 in endocervicites and 1 in hypertrophied cervix. The case of carcinoma in situ was found in a patient with unhealthy cervix. Chakravarty *et al* (1976) and Jamila *et al* (1980) have found that majority of dysplasias occurred in healthy looking cervices. In contrast Rao *et al* (1973) reported highest incidence of dysplasia in association with endocervicites and cervical erosion, as observed in the present series. There is thus no definite clinical impression which leads us to suspect the cases of dysplasia and carcinoma in situ. This once again stresses the importance of cytological examination in detecting abnormal lesions early enough for appropriate treatment.

Summary

Analysis of 1000 cervical smears taken from the rural women is reported. The analysis is done with reference to age and clinical appearance of the cervix. Cytological pattern revealed 40 cases of Dysplasis, one case of carcinoma in situ and one case of carcinoma. Inflammatory smears were noted in 446 cases.

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