MALIGNANT AND PREMALIGNANT LESIONS IN UNHEALTHY CERVIX

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The introduction of cytology into gynaecological practice has significantly improved the detection of cervical cancer at a much earlier stage. In addition, cytology is capable of diagnosing the precursers of cervival cancer i.e. dysplasia and carcinoma in situ. Thus, the value of cytology for early cancer detection has been established beyond doubt.

The relation of carcinoma to other abnormalities of the uterine cervix is well documented. Stroll (1958) found an incidence of carcinoma in clinically eroded cervix to be 26 times more common than in clinically healthy cervix. Wahi *et al* (1969) have stated that cervical lesions like chronic cervicitis, erosion, lacerations, are predisposing conditions for malignancy of cervix. Rao *et al* (1973) have observed that more than 80% of their cases showing suspicious or positive smears had unhealthy cervix.

Unhealthy cervix is a common finding in gynaecological out patient departments. This study was undertaken with a view to find out the incidence of premalignant and malignant lesions associated with unhealthy cervix and to study some clinical characteristics associated with these lesions.

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Material and Methods

Among the patients attending the Gynaecological Department of MKCG Medical College Hospital, Berhampur, during the period from January 1973 to December 1974, 510 cases were found to be having unhealthy cervix and these formed the subjects for study. In each case after thorough history taking and general examination the cervix was carefully inspected and its naked eye appearance was noted. Then a scrap smear from squamo-columnar junction of the cervix was taken for Papanicolau stain. Table I shows the procedure that provided tissue for diagnosis.

TABLE I
Method of Study

	Number of cases
Cytology + punch biopsy	450
Cytology + punch biopsy + cone biopsy	5
Cytology + punch biopsy + cone + hysterectomy	13
Cytology + punch biopsy + hysterectomy	42
Total	510

Multiple punch biopsies were taken in all cases after toludine blue test. As far as practicable 6 to 8 adequate tissue fragments from squamo-columnar junction of the cervix were collected. Cases diagnosed as invasive carcinoma by punch biopsy were not further investigated. Cold knife conization had been performed on 18 cases, of which 9 had positive cytological report and rest showed moderate dysplasia in either or both methods. Multiple sections were studied from the conization specimens. In 55 cases serial sections of the cervix from hysterectomy specimens were examined to find out any pathology which might have escaped earlier detection.

Observations

Out of 510 cases studied, in 448 cases (87.85%) there was no epithelial abnormality. Sixty-two (12.15%) cases showed evidence of cervical neoplasia ranging from mild dysplasia to invasive carcinoma of the cervix. Dysplasia of all grades were present in 48 cases (9.42%). Eight cases (1.57%) had carcinoma in situ. Invasive cervical carcinoma was diagnosed in 6 patients (1.16%). (Table II).

From among 62 cases of neoplasia the punch biopsy alone detected 3 cases of invasive carcinoma of cervix, 6 cases of carcinoma in situ and 52 cases of dysplasia. Examination of conization specimens revealed 2 cases of invasive carcinoma which were reported by punch biopsy as cases of severe dysplasia and carcinoma in situ. Three cases of carcinoma in situ detected in conization specimens had also shown lesser degrees of lesion by punch biopsy.

In 46 cases, serial sections of hysterectomy specimen revealed no pathology. One case of invasive carcinoma diagnosed from hysterectomy specimen was reported as smear negative and had no epithelial abnormality on punch biopsy.

The age distribution of patients with cervical neoplasia is given in Table III. The age range of the patients with dysplasia varied from 25 to 44 years of age. Maximum number of patients (60.08) were in age group of 30 to 39 years. The mean age of these patients was 35.4 ± 4.168 years.

TABLE II

Different Types of Cervical Neoplasia Detected

Total Cases Studied; 510

Types of Lesion	Number of cases	Percentage
1. Mild Dysplasia	28	5.49
2. Moderate Dysplasia	12	2.36
3. Severe Dysplasia	8	1.57
4. Carcinoma in Situ	8	1.57
5. Invasive Carcinoma	6	1.16
Total	62	12.15

TABLE III

Age Incidence of Cases with Cervical Neoplasia

Age Group	Dysplasia		C.I.S.		Invasive Carcinoma	
	No.	%	No.	%	No.	%
25–29 years	5	10.42	—	—	—	—
30–34 years	22	45.82	—	—	—	—
35–39 years	15	31.26	1	12.50	—	—
40–44 years	6	12.50	7	87.50	—	—
45 and above	—	—	—	—	6	100.00
Total	48	100.00	8	100.00	6	100.00

Carcinoma in situ was most common between 40 to 44 years, though one case was detected in a woman aged 36 years. The mean age of women with carcinoma in situ was 42.3 ± 1.863 years. All the 6 cases of invasive carcinoma were found above the age of 45 years with a mean age of 46.5 years.

The primary presenting symptoms of the patients with unhealthy cervix are given in Table IV. Out of 226 cases, with irregular vaginal bleeding as the main complaint, 37 (16.36%) had cervical neoplasia. This observation was found to be significant statistically ($P < 0.01$). Two hundred cases came for abnormal vaginal discharge, out of which only 23 (11.50%) had cervical neoplasia. This observation was not found to be statistically significant ($P > 0.05$).

As shown in Table V cervical erosion and chronic cervicitis were the common clinical findings in the present study. Their association with cervical neoplasia was not found to be statistically significant.

Disscussion

A distinctly higher incidence of cervical malignancy has been reported in selected group with unhealthy cervix. Young (1949) found an incidence of 1.2% and Beecham *et al* (1952) of 6%. Stroll (1958) from large cytological survey recorded an incidence of all types of cervical carcinoma to be 1 in 1345 in macroscopically smooth cervices while in those clinically eroded it was 1 in 53. In the present work, 14 (2.74%) cases of cervical carcinoma could be detected out of 510 cases of unhealthy cervix. Sunanda Bai and associates (1968) and Kroll (1970) have also reported similar findings.

TABLE IV
Symptoms Cervix

Presenting Symptoms	Total Number of cases	Cases with Cervical Neoplasia		Cases without Neoplasia	
		No.	%	No.	%
Irregular Bleeding	226	37	16.36	189	83.64
Abnormal Discharge	200	23	11.50	177	88.50
Prolapse of Uterus	44	1	2.27	43	97.73
Others	40	1	2.50	39	97.50
Total	510	62		448	

$P < 0.01$ for irregular bleeding.
$P > 0.05$ for abnormal discharge.

TABLE V

Gross Appearance	Total Cases	With Neoplasia		Without Neoplasia	
	No.	No.	%	No.	%
Cervical Erosion	228	35	15.32	193	84.68
Cervicitis	252	27	10.70	225	89.30
Cervical Polyp	20	—	—	10	100.00
Others	10	—	—	10	100.00
Total	510	62		448	

$P > 0.05$.

The incidence of dysplasia in the present series was found to be 9.4%. Rao *et al* (1973) reported the incidence of cervical dysplasia in unhealthy cervix to be 9.5%. Age range of patients with dysplasia varied from 25 to 44 years with mean age of 35.4 ± 4.168 years in this series. This age pattern is similar to that of other published series. Reagan *et al* (1955) reported a mean age of 34 years in 1261 women with cervical dysplasia. Meisles (1964) has also observed the mean age of patients with cervical dysplasia to be 36.2 years.

The mean age of women with carcinoma in situ of uterine cervix has been reported by Reagan (1955) and Meisels (1964) to be 42.3 and 40.2 years respectively. In present study the mean age of patients with carcinoma in situ was found to be 42.3 years. All the 6 cases of invasive carcinoma in our series were seen among women in the age group of 45 years and above. Similar age range has been reported by Wahi *et al* (1969), Rao *et al* (1959) and others. The average age of invasive cervical cancer cases in our study was 46.5 years. This observation is in agreement with the reports of Lumbard and Potters (1950). The average age in their series was 46.8 years. These findings with regard to the age distribution of the patients with cervical neoplasia lend support to the concept that dysplasia antedates malignancy and it takes about four to seven years for dysplasia to proceed to carcinoma in situ of cervix. Reagan (1955) and Meisles (1964) had also similar observations.

In the present work, out of 226 patients presenting with irregular vaginal bleeding, 37 (16.36%) had cervical neoplasia. This observation was found to be statistically significant ($P < 0.01$). Similar observation was made by Rao *et al* (1973). Therefore, women with this compalint should be investigated carefully for premalignant and malignant lesions.

Although vaginal discharge was found to be a quite common symptom of unhealthy cervix, its association with cervical neoplasia was not found to be significant statistically in the present series ($P > 0.05$).

Mali *et al* (1969) observed that majority of patients with cervical dysplasia had cervical erosions. Rao *et al* (1973) found that a majority of cases with cervical neoplasia were associated with endocervicitis but in the present series no significant association of cervical neoplasia with gross appearance of cervix could be established ($P > 0.05$).

Summary and Conclusions

Five hundred and ten women with unhealthy cervix, attending the Gynaecological Department of MKCG Medical College, Berhampur (Orissa) from January 1973 to December 1974, have been studied. All cases were subjected to cytology and multiple punch biopsy. Conization was performed in 18 cases and 55 hysterectomy specimens have been examined in detail to find out any epithelial abnormality of the cervix. Among 510 cases our study revealed 6 cases of invasive carcinoma, 8 of carcinoma in situ and 48 of dysplasia. The incidence of cervical neoplasia was high in comparision to the incidence seen in mass cytological programme. Mean age for dysplasia, carcinoma in situ and invasive carcinoma was found to be 35.4, 42.3 and 46.5 years respectively.

In unhealthy cervix, irregular vaginal bleeding was found to be more frequently associated with cervival neoplasia. Hence these cases should be thoroughly

inyestigated in order to exclude the presence of malignant and premalignant lesions. Gross appearance of cervix was not found to be a significant factor in determining the risk of asociation with cervical neoplasia.

As the cases with unhealthy cervix form a special high risk group routine cytological screening of unhealthy cervix is strongly recommended when resources are limited for mass screening.

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