A STUDY OF CERVICAL DYSPLASIA AND ITS RELATION WITH VARIOUS FACTORS

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Introduction

Invasive carcinoma of cervix is preceded by epithelial changes in situ and as early as 1908 Schanenstein made his classical observation, on the origin of carcinoma of cervix. With the advent of cytologic techniques the intraepithelial changes have become the focus of universal interest. There is substantial evidence that carcinoma cervix does not begin abunitio in the epithelium, but is preceded by a series of transformation which are associated with varying degrees of nuclear abnormalities and disarrangement. These changes are commonly referred to as dysplasia which is at times more easily identified in cytologic material than in histologic sections. There is ample evidence to demonstrate that these lesions are capable of progressing to carcinoma in situ and invasive carcinoma.

Cancer vervix is the commonest neoplasms of female population here and we were therefore interested in screening the population to note the incidence of dysplastic changes which is a fore-runner of carcinoma cervix.

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Material and Methods

Patients attending the antenatal clinic and gynaec. O.P.D. of U.I.S.E. Maternity Hospital attached to the G.S.V.M. Medical College, Kanpur were screened from January 1978 to December 1979. A total number of 36,259 patients were examined during this period to study the cervical lesions.

One thousand, nine hundred and twenty patients were found to have obvious cervical lesions by speculum examination. All these cases were subjected to exfoliative cytology by Papanicolaou technique. Smears were obtained from the posterior fornix stained and classified according to the paranicolaous technique.

Observations

Table I gives the findings of exfoliative

TABLE I

Various Grades of Dysplasia

S. No.	Grades of dysplasia	No. of cases	Percentage
1.	Grade I (Fig. 1)	259	51.59
2.	Grade II (Fig. 2)	171	34.06
3.	Grade III (Fig. 3)	72	14.34
	Total	502	99.99

cytology. Dysplasia was noted in 26.14% of the cases.

The dysplastic cells were classified into 3 grades: Grade I, II, III (mild, moderate and severe dysplasia) (Figs. 1, 2 and 3). Table I shows the number of cases of various grades of dysplasia. Grade I (mild) dysplasia was found to be most frequent.

Dysplasia was found in women between 20 to 70 years of age. 45.8% cases were seen in the 4th decade and 28.17 in the 5th decade.

A very low incidence of dysplasia was observed in nulliparous women 2, (0.39%). 79.56% cases of dysplasia have been noted in multiparous women having more than 3 children.

Dysplasia was commonest in the very low socioeconomical groups (Income less than Rs. 70). The patients attending the outdoor area mainly Hindus or Muslims and a few Christians. Though both Hindus and Muslims have a high incidence of dysplasia hindu women appear to have a slightly higher incidence 258 (51.9%) than Muslims 204 (40.63%).

Table II shows the relation between the age of marriage and occurance of dysplasia. More than 70% cases of dysplasia were in married women below the age of 20 years. A very low incidence of dysplasia has been noted in the late age group. This has a direct bearing on the age of first pregnancy and here also it has been noted (Table III) that earlier the first pregnancy the higher incidence of dysplasia.

Discussion

The incidence of dysplasia in our series was 26.14%. Dysplasia was found commonly in the age group of 30-39 years (45.8%). These findings are similar to those of Hertig and Young (1952), Mckay *et al* (1959) and Wahi *et al* (1969). Dysplasia was uncommon below the age of 29 years and also above 60 years. Carcinoma cervix was commonly found

TABLE II
Relation of Age of Marriage with Dysplasia

S. No.	Age of Consumation of marriage	Total No. of cases	Percen- tage	Cases with Dysplasia	Percen- tage
1.	Before 20 years	841	43.8	368	70.76
2.	20-29 years	982	51.14	129	24.80
3.	30-39 years	97	5.0	23	4.42
	Total	1920	99.94	520	99.98

TABLE III
Relation of Age at First Pregnancy to Dysplasia

S. No	Age at first pregnancy	Total No. of cases	Percen- tage	Cases with Dysplasia	Percen- tage
1.	Before 19 years	991	51.61	296	56.9
2.	20-29 years	807	43.03	213	40.0
3.	30-39 years	102	5.3	11	2.11
4.	Not conceived at all	20	1.04	—	—

between 40-49 years. Dysplasia was observed to occur at an earlier age than malignancy. One could conclude that there is a span of 10-15 years during which some dysplasias progress to carcinoma. Documented cases of marked dysplasia have persisted for 15-20 years without change. On the other hand, mild dysplasia may antedate the appearance of carcinoma in situ by several years. However, most large prospective studies of dysplasia indicate that less than 15% will progress to a more serious process.

Dysplasia is more common among women having more than 3 children and less common among nulliparous women. Wahi et al (1969) reported similar findings. Dysplasia was noted to be more common among patients belonging to the very low socioeconomic strata. The combination of poor personal hygiene and trauma following frequent deliveries increases the incidence of dysplasia which could subsequently lead to carcinoma cervix.

Dysplasia was common among patients who had an early marriage and also patients who had an early first pregnancy. Our findings are in accordance with the findings of Wahi et al (1969), Luthra (1970) that cervical malignancies, were related to coital factors which in turn were related to socio-economical status of the patients as patients belonging to the low socioeconomic group have a high incidence of promiscuity and also have their first pregnancy at an early age.

The difference in the incidence of dys-plasia among Hindus and Muslims is not significant. During the study it was also noted that contraceptive measures did not have any correlation with the occurrance of dysplasia. Dysplasia was noticed commonly in patients having mucoid vaginal discharge and menstrual irregularity. The association of menstrual irregularity with dysplasia was also noted by Meghissi and Mark (1968). Erosion was the commonest per speculum finding in patient having dysplasia.

From the above mentioned it is apparent that dysplasia follows the same pattern as carcinoma cervix. Most large prospective studies of dysplasia indicate that less than 15% will progrees to a more serious condition. Careful morphological subclassification of dysplasia may correlate with the biologic potential and better clinical management. Thus patients, with cellular evidence of dysplasia must be carefully evaluated and a close follow up should be ensured.

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