CERVICAL DYSPLASIA AND THEIR BIOLOGIC BEHAVIOUR — A CYTOLOGIC STUDY

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SUMMARY

Fifty-three women with cervical dysplasia were followed up for a period ranging from one to 18 months. They were classified as mild dysplasia - 18, moderate dysplasia - 22 and severe dysplasia - 13. 77.8 percent of moderate and 15 percent of severe dysplasias regressed while 30 per cent of severe dysplasias progressed, 69 per cent of dysplasias which regressed were associated with inflammation.

Introduction

Cervical carcinoma is the commonest malignancy in females in India, although its incidence has been decreasing in more advanced countries of the World (Peto and Hansen, 1986). The latter is due to widespread screening so that greater number of women with preinvasive disease are detected. The malignant potential of cervical intraepithelial neoplasia (CIN) grade-III (severe dysplasia) is established (McIndoe, et. al., 1984). On the other hand, biologic behaviour of grade-I (mild dysplasia) and grade-II (moderate dysplasia) are not clear. Some of these cases progress on to higher grades and even invasive cancers (Sorenson, et.al. 1964; Christopherson, 1969; Nasiell, et.al., 1983; Campion, et.al., 1986; Nasiell, et.al., 1986). The criteria determining the ones that will progress to more severe grades are not clear. Although some evidence has been presented in that smears containing the genome of Human Papilloma Virus 9HPV) type 16 are associated with a substantial risk of progression to invasive carcinomas (McCance, et.al., 1985). In an effort to determine the natural course of the various forms of dysplasia, a retrospective analysis was undertaken of the cervical dysplasias seen in the Institute during the last four and a hlaf years.

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Patients and Method

Two hundred and sixty four women with cervical dysplasia were seen between january, 1982 and June, 1987. Vaginal smears stained by the Papaniculao stain were examined and the dysplasias graded as mild, modeate or severe. Of the 264

women, 108 had mild dysplasia, 123 moderate and 33 severe dysplasia at presentation. Smears were also examined for associated inflammation and causative agents were looked for with a special effort to rule out HPV infection. Follow-up was available in only 53 of these cases for a period ranging from one to 18 months.

Observations

Of the 53 patients on whom follow-up was obtained, 18 women were classified as mild dysplasia, 22 as moderate and 13 as severe dysplasia. Regression was seen in 29 patients (Table-I). Of these more than half belonged to the groups of mild dysplasia. The other important feature seen in

TABLE - I
CERVICAL DYSPLASIA CASES WHICH REGRESSED

Transition of dysplasia	*No.of cases*	*Range of transition period (Months)*	*Associated inflammation*
Mild to negative	14	1-8	10 (3)
Moderate to negative	10	2-18	7 (2)
Moderate to mild	3	2-5	2
Severe to negative	1	6	1
Severe to moderate	1	1	–
Total	29	1-18	20 (5)

() Associated trichomonas vaginalis infection

TABLE - II
CERVICAL DYSPLASIA WHICH PROGRESSED

Transition or dysplasia	*No.of cases*	*Range of transition period (months)*	*Associated inflammation*
Mild - Mod	4	3 - 18	3 (1)
Mod - Sev	2	2 , 3	1 (1)
Mod - Scc	1	3	–
Sev - Scc	4	1 - 18	2
Total	11	1-18	6 (2)

( ) Associated trichomonas vaginalis infection
Mod : Moderate
Sev : Severe
Scc : Squamous cell carcinoma

TABLE -III
PERSISTENT CERVICAL DYSPLASIA

Grade of Dysplasia	*No.of cases*	*Follow-up period(months)*	*Associated inflammation*
Moderate	6	2 - 6	3
Severe	7	1 -18	1
Total	13	1-18	4

TABLE - IV
CERVICAL DYSPLASIA

Grade of Dysplasia	*Total No.*	*Regressed*	*Static*	*Progressed*
Mild	18	14 (77.8)	–	4 (22.2)
Moderate	22	13 (59.1)	6(27.3)	3 (13.6)
Severe	13	2 (15.4)	7 (53.8)	4 (30.8)

( ) Percentage

this group was the associated inflammation which was seen in the majority. 20/29 women had inflammation at presentation which disappeared on treatment together with a regression in the degree of dysplasia. The patient with severe dysplasia who regressed to normal also had severe inflammation which subsequently disappeared. Two of the ten cases of moderate dysplasia which regressed had shown koilocytic atypia. The only other etiologic agent that was seen in the smears was trichomonas vaginalis. Eleven cases showed a progression to higher grades of dysplasia (Table-II) at which time they were subjected to treatment in the form of cervical conisation, cryosurgery or hysterectomy. Thirteen women showed a persistance of the original grade of dysplasia on follow-up (Table-III). These women were also subjected to the above modes of therapy.

Results

Thus from the study it appears that 54.7 percent of the cases of dysplasia show a tendency towards regression. Of these the majority either belonged to the groups of mild dysplasia (77.8%) or had associated inflammation (69%). The grade of dysplasia regressing with the disappearance of the inflammation with treatment. One case of severe dysplasia with associated inflammation also showed regression. Thus in cases with inflammation, the chances that the dysplasia will regress are high. Eleven cases showed progression to a higher grade of which five cases progressed to invasive carcinoma.

Discussion

Previous studies to determine the biological outcome of the various grades of dysplasia have yielded variable and confusing results. Overall rates of regression

varying from 30 per cent (Christopherson, 1969) to 83.3 percent (Rawson and Knoblich, 1957). This is primarily due to the widely differing criteria used for the selection of cases and the different follow-up periods. Most of the studies on CIN-I report a high rate of spontaneous regression of 62 percent and a low risk for pregression of 13 to 15 percent (Nasiell et.al., 1986; Hall and Walton, 1968). A greater percentage of regression was seen in our cases. Of the mild dysplasias 77 percent regressed, 20 percent showed progression, the rest remaining static. On the other hand - with the use of stricter criteria, Richart and Barron(1969) observed a progression to carcinoma-in-situ in 60 percent of grade-I cases and 90 percent of grade-III cases.

Regression was seen in a minority. This was also reported by Campion et.al. (1986) who followed up 100 women less than 30 years old with CIN-l. Regression to normal with no recurrence was observed in only 7 percent of the women. The majority of their cases remained stationary in the 30 months of follow-up, however 26 percent showed a progression to CIN-lll.

Studies on CIN-ll and CIN-lll show higher rates of progression and lower rates of regression, the progression being maximum in CIN-lll (Nasiell, et al., 1983; Hall and Walton, 1968). Our observations also showed this. Four out of 18 patients of severe dysplasia on diagnosis are more prone to develop a more serious lesion. Those associated with inflammation show regression of the dysplasia. However, it must be kept in mind that in follow up, normal cytology extending upto 12 months has been seen in 3.8 per cent of patients (Nasiell, et.al., 1983). The role of biopsy is also controversial. Whereas some authors are of the firm opinion that colposcopic guided biopsies are essential for the accurate diagnosis of the grade of CIN (Campion, et.al., 1986), others believe that these hinder the study of biologic behaviour since they may be curative in some proportion of patients (Koss, et.al., 1963).

No correlation could be found in the time taken either towards progression or regression.

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