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Cervical disease in the Sri Lankan female

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Summary

The study was designed to determine the types of cervical lesions in the Sri Lankan females with special emphasis on those lesions which are directly or indirectly related to carcinoma of the cervix, in relation to age. Histological sections of 1000 cervical specimens were reviewed and 809 were included in the study.

Dysplasia and lesions of human papilloma virus infection, (koilocytosis), with a premalignant potential was found in 0.8% (n = 6)) and 8.4% (n = 68) of the study group, respectively. Dysplasia was seen in the 31-50 age group while koilocytosis occurred most frequently in the 41-50 age group. Endocervical gland squamous metaplasia was detected in 13.9% (n = 113), highest number being in the 31-40 age group. Non-specific lesions such as inflammation, surface squamous metaplasia and ulceration were also detected.

Key words: Cervical carcinoma, pre-malignant, dysplasia, koilocytosis, endocervical metaplasia

Introduction

Cervical carcinoma is one of the commonest malignancies amongst Sri Lankan females (1). An attempt was made to determine the various types of cervical lesions in a population of Sri Lankan women, with emphasis on identifying the pattern of disease states that are directly or indirectly related to carcinoma of the cervix in relation to age.

Carcinoma of the cervix results from a series of epithelial changes, ranging from progressively more severe dysplasia to invasive carcinoma, and is believed to originate in the transformation zone (2). While dysplasia is considered to be a definite pre-malignant lesion, squamous metaplasia is regarded to be insignificant unless extensive, and/or involves the glandular component (3). Human Papilloma Virus (HPV) has been related to the genesis of cervical carcinoma (2).

It is important to detect the potentially dangerous lesions early. As a preliminary step we present the histopathological pattern of cervical lesions in relation to age, with a view to identifying the role of age as a screening criterion.

Materials and Methods

The histology of 1000 cervical specimens received over a 2 year period from January 1991 and analysed by the first author were reviewed jointly by both authors at the Department of Pathology, Faculty of Medicine, University of Colombo. Only those sections representing the ecto and endocervix along with the squamo-columnar junction (n = 809) were included while those specimens with frank invasive carcinomas were excluded (n = 62). The specimens included for study were those of uteri removed for various gynaecological indications and those from cervical biopsies.

The sections had been stained with Haematoxylin and Eosin. The histologically identified lesions were analysed according to 10 year age groups. The clinical details recorded on the request forms sent with the specimens were used for this purpose.

Results

The specimens showing dysplasia, koilocytosis and endocervical gland metaplasia were

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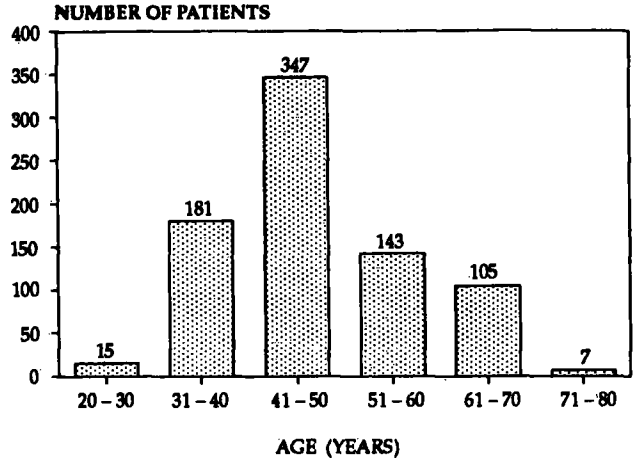
Table 1. Significant lesions – according to age groups

Age groups	n	Dysplasia	Koilocytosis	Endo. gland metaplasia
21 – 30	15	0	0	0
31 – 40	181	4 (2.2%)	0	63 (34.8%)
41 – 50	347	2 (0.6%)	50 (14.4%)	32 (9.2%)
51 – 60	143	0	6 (4.2%)	18 (12.6%)
61 – 70	105	0	6 (5.7%)	0
71 – 80	7	0	6 (85.7%)	0
Total	798	6	68	113

Table 2. Non-specific lesions according to age groups

Age groups	n	Inflammation	Surface metaplasia	Ulceration
21 – 30	15	15 (100%)	0	11 (73.3%)
31 – 40	181	96 (53.0%)	33 (18.2%)	0
41 – 50	347	116 (33.4%)	92 (26.2%)	32 (9.2%)
51 – 60	143	48 (33.6%)	78 (54.5%)	32 (22.4%)
61 – 70	105	86 (81.9%)	67 (63.8%)	53 (50.5%)
71 – 80	7	7 (100%)	7 (100%)	7 (100%)
Total	798	368	277	135

Fig. 1 Age distribution of sample patient population



TOTAL NO. 809 (AGE UNKNOWN IN 11)

considered as significant lesions and accounted for 187 (23.1%) of the 809 included in the study. Inflammation, surface squamous metaplasia and ulceration were evaluated in a separate analysis. Two hundred and fifty seven (31.8%) were normal specimens. In 11 specimens, which showed normal histology, the age of the patient was not recorded. This did not affect the analysis as only those with abnormalities have been evaluated further.

Cervical dysplasia was detected in six patients. Five were clinically unsuspected. HPV infection was most prevalent in the 41-50 and 70-80 age groups (Table 1). Squamous metaplasia within endocervical glands was most prevalent in the 31-40 age group.

Inflammation, surface squamous metaplasia and ulceration, according to age groups are analysed in Table 2.

Most cervices (53.3%) had more than one pathology.

The age distribution of our population is shown in Figure 1.

Discussion

Dysplasia and koilocytosis are known to have pre-malignant potential (4, 5). In our series dysplasia was detected in 0.8% (6 patients). The term dysplaisa (cervical intraepithelial neoplasia) designates the presence of atypical cytological features in the squamous-epithelium, short of carcinoma *in situ* (3), which is more difficult to define. The international definition of carcinoma *in situ* states that the entity is an epithelial change occurring throughout the entire thickness without any differentiation.

Dysplasias are graded as mild, moderate, and severe according to the degree of nuclear abnormalities seen (3). Frank carcinoma *in situ* was not detected in our series. In our study, the 6 patients who had dysplaisa were in the 30-50 age group, of which 4 were in the 30-40 group. There were two patients with incidental severe dysplasia and they were in the latter group. The highest number of patients in our study population was in the 40-50 group, whereas the highest number of dysplasia (4/6) were in the 30-40 group. This is noteworthy. As we received only 15 specimens of females less than 30 years, it is not possible to comment on the true incidence of dysplasia in this age group.

Our study revealed 68 patients (8.4%) with evidence of HPV infection, with the highest incidence in the 40-50 age group. HPV infection (especially types 16, 18) may be involved in the genesis of cervical carcinoma (5), the strongest evidence being the detection of viral DNA in 75-100% of patients with precancerous lesions and invasive carcinoma (2).

The term squamous metaplasia is used to designate the focal or extensive replacement of the mucus secreting glandular epithelium of the endocervix by stratified squamous epithelium, which, in its later stages, is morphologically indistinguishable from the normal ectocervical epithelium. In our series, endocervical gland squamous metaplasia was detected in 113 patients (13.9% of the population). The peak age was 30-40 years, and this is the same age group with the highest incidence of dysplasia. Although there is no evidence that squamous metaplasia is directly related to carcinoma, metaplastic squamous epithelium within endocervical glands is closely associated with the possible morphogenesis of some squamous carcinoma. It may be worthwhile studying more about squamous metaplasia, especially when it is extensive and/or involves the endocervical glands.

The pattern of non-specific lesions, namely surface squamous metaplasia, cervicitis, and ulceration, is that which is expected in the study population. Ulceration is present mainly in the post-menopausal age group, probably because of the high incidence of utero-vaginal prolapse. Squamous metaplasia closely parallels the occurrence of chronic inflammation, as expected.

Although a larger cross-sectional and multicentric study is necessary to come to a conclusion, this study can be regarded as

indicator of the prevalence of cervical lesions in Sri Lankan women. It may be concluded that significant cervical lesions with pre-malignant connotations exist in our population and an attempt should be made to detect these early.

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