

4. ULTRASONOGRAPHY		
- Tumour characteristics – Hypoechoic mass in cervix	37	80 %
Pyometra	09	20 %
- Tumour size - <= 4 cms	26	57 %
>4 cms	20	43 %
- Lymph nodes - Positive	05	11 %
Negative / Unknown	41	89 %
5. GROSS		
- Ulceroinfiltrative	33	72 %
- Exophytic	01	02 %
- Hypertrophix cervix	09	19 %
- No visible lesion	03	07 %
6. MICROSCOPY		
- Squamous cell carcinoma	42	91 %
Keratinizing	38	91 %
Non keratinizing	03	07 %
Basaloid	01	02 %
- Adenocarcinoma	04	09 %
Endometrioid	03	75 %
Clear cell variant	01	25 %
7. STAGE		
- IIA	18	39 %
- IIB	19	41 %
- IIIA	06	13 %
- IIIB	03	07 %
8. TREATMENT		
- Surgery alone	46	100 %
- Surgery and radiotherapy	21	46 %
9. MORTALITY		
- IIA	01	10 %
- IIB	00	00 %
- IIIA	02	20 %
- IIIB	07	70 %

On gross examination, the growth was ulceroinfiltrative and friable in 33 cases and exophytic in one case [Figure 1], hypertrophic cervix was noted in 9 cases and in 3 cases no visible lesion was detected. In seven of the hysterectomy specimens, the growth was seen infiltrating bilateral adnexa with multiple deposits on paratubal tissue. Endometrial thickness varied from 2 cms to 3.5 cms. Two cases showed intramural fibroids with a mean diameter of 2.5 cms and 1.6 cms respectively as an additional pathology. A focus of adenomyosis was seen in one case.

Figure 1 Gross photograph of a greyish white exophytic growth (marked with arrow) in clear cell adenocarcinoma of cervix

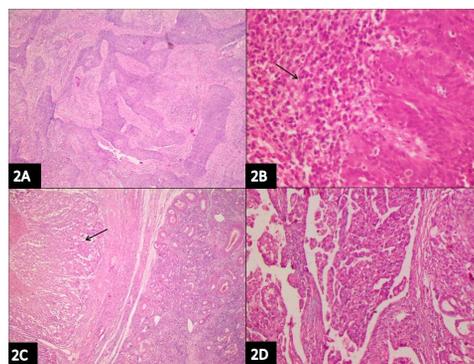


On Microscopy, all 46 cases were diagnosed as epithelial malignancies with 42 cases of squamous cell carcinoma (SCC) and four cases of adenocarcinoma. Twenty nine cases (69 %) of SCC were well differentiated, twelve (29 %) were moderately differentiated and one (02 %) was poorly differentiated. Of these forty two cases of squamous cell carcinomas, two cases were reported as microinvasive squamous cell carcinoma where depth of invasion was less than 5 mm and horizontal spread was more than 7 mm. Large cell keratinizing squamous cell carcinoma was the commonest type (90 %). [Figure 2A] Most cases were accompanied by moderate to dense lymphoplasmacytic cell infiltrate. [Figure 2B] In seven cases, metastatic squamous cell carcinoma was observed in bilateral ovaries and paratubal tissue. [Figure 2C] Additional histopathological findings included presence of koilocytic changes in three cases of SCC and cervical intraepithelial neoplasia – Grade III in two cases of SCC. In two of the cases, well circumscribed leiomyomas with interlacing fascicles of smooth muscle bundles were seen in the myometrium.

Amongst the four cases of adenocarcinoma, one case revealed clear cell morphology with tubulocystic and papillary arrangement of tumour cells showing abundant clear to eosinophilic cytoplasm and

large irregular nuclei. At places hobnailing of the cells was prominent. [Figure 2D] In one case, endometrial glands and stroma were seen embedded in the myometrium.

Figure 2A : Photomicrograph shows large cell keratinizing squamous cell carcinoma arranged in nests and islands (H&E,50X), Figure 2B: Photomicrograph shows dense lymphoplasmacytic infiltrate (Marked with arrow) adjacent to tumour cells (H&E,100X), Figure 2C : Photomicrograph shows ovarian metastasis (marked with arrow) by large cell keratinizing squamous cell carcinoma of cervix (H&E,50X), Figure 2D: Photomicrograph shows clear cell adenocarcinoma arranged in tubulo-cystic pattern (H&E,100X)



Of the total 46 cases, 18 (39 %) patients were in stage IIA, 19 (41%) patients in stage IIB, 6 (13%) patients were in stage IIIA and 03 (07%) patients were in stage IIIB. Lympho-vascular and perineural invasion was present in four and five cases respectively with all cases in stage III.

Treatment offered in these patients was either surgery alone or a combination of surgery and radiotherapy both. Twenty one cases received adjuvant radiotherapy. The mean follow up period of these patients was 30 months (Range: 12 months to 48 months). Ten patients expired within the first year of follow up of which seven patients were in stage IIIB, two patients in stage IIIA and one patient in stage IIA. Three of these patients had adenocarcinoma and remaining seven had squamous cell carcinoma. All the three cases of adenocarcinoma were in stage IIIA and two cases of SCC were in stage IIB, one in stage IIIA and four in stage IIIB.

Discussion

Carcinoma cervix is a public health problem in developing countries like India where every year 122,844 women are diagnosed with cervical cancer and 67,477 die from the disease. [3] Increased burden of cervical cancer in India and Southeast Asian countries is due to poor living standards, high prevalence of HPV and lack of screening. [4] Moreover, there is a marked diversity in the incidence of carcinoma cervix between the urban and rural population of India alone. Effective screening programs and enthusiastic participation in awareness camps has reduced its prevalence in educated section of the society while the incidence is still high in rural India. In a study by Krishanappa et al, cancer cervix was observed in 10.28 % of the cases over a period of five years. [5] The incidence was 11.85 % in the present study which depicts a fraction of population from northern India. Contrary to this, the incidence was high (17.5 %) in another study from South India. [6] Our institute caters predominantly patients belonging to low socio-economic status who cannot bear the expenses of surgery. The lower incidence in the present study could be attributed to fewer patients visiting the hospital on the day of surgery.

In the present study, mean age at the time of presentation was 56 years with most cases seen in fifth and sixth decade. In a study by Thakur et al and Christie et al, mean age was 48.1 years and 34.5 years respectively. [7,8] Overall the peak incidence of cervical carcinoma has been recorded between 55 to 59 years in India. [9] 93.5 % of the women were illiterate in our study which is in concordance with the findings described by Satyanarayana et al with 63.2% of the women being illiterate and belonging to poor living standards. [10]

Although HPV infection is one of the major causes of carcinoma cervix, the long interval between initial infection and disease indicates involvement of some other factors such as sexual habits like early age

at first coitus, co-infection with HIV, multiparity, smoking, nutritional deficiency, genetic susceptibility and use of hormonal contraceptives as was observed in our set up also.

Many times early malignancy is so inconspicuous that patients are often asymptomatic. However, most common symptoms are white discharge, vaginal bleeding, painful coitus, menorrhagia, and abdominal pain. Advanced malignancies can present with profused bleeding, weight loss, severe backache, prolapse, cystocele, rectocele, bone fractures and distant metastasis. In the present study, white discharge and vaginal bleeding were the commonest symptoms as was observed in other studies by Shruthi et al., Das et al and Krishanappa et al. [5,6,11]

Squamous cell carcinoma is the most common type of cervical malignancy all over the world. [5,12,13] In the present study also, squamous cell carcinoma accounted for ninety one percent of all cases. These lesions arise from the squamo-columnar junction and may be keratinizing or non-keratinizing type. The present study demonstrated large cell keratinizing squamous cell carcinomas (90 %) as the most common subtype. This finding was similar to a study done by Bisht et al who also reported large cell keratinizing SCC as the commonest type. [14] However, in a study by Sinha et al and Krishanappa et al, large cell non keratinizing SCC was the most common variant accounting for 55 % of the SCC. [5,15]

Over the last four decades, various studies from developed world have documented a relative increase in the incidence of adenocarcinoma from 12 % to 24 % when compared to SCC. [16] The present study showed only 9 % (n=4) of the adenocarcinoma cases. One rare case of clear cell adenocarcinoma (CCA) was observed in a 48 years old woman who presented with postmenopausal bleeding and pain in the pelvic region. Of all the adenocarcinoma, CCA accounts for 4 % - 9 % being relatively rare in the lower genital tract. [17] It usually presents in younger patients with history of exposure to diethylstilbestrol (DES) in utero. However, it has been described in older women also with a median age of 53 years. According to Thomas et al, clear cell cervical cancer in itself does not have a worse prognosis than SCC. [18] This patient received radiotherapy following surgery and is doing well till today.

Mortality is higher with adenocarcinoma than squamous cell carcinoma of the cervix. [19] In the present study also, death rate (75 %) with adenocarcinoma was much high when compared to SCC (17 %). Thus, survival with squamous cell carcinoma had been far better than adenocarcinoma. Also majority of the deaths occurred in patients with advanced stage of the disease (stage III) due to complications arising out of treatment or disease per se.

Pre-treatment imaging studies are useful to assess the primary tumour size, site, local extent, associated lymphadenopathies, staging and thereby help in providing prognostic information and subsequent treatment planning. In the present study, most cases were in stage II accounting for an incidence of 70 % followed by 20 % in stage III which was comparable to a study by Rani et al with 71.65% of the patients in stage II and 22.83% in stage III. [20] Another study from southern part of India revealed that modal presentation of cervical cancer was in stage IIB. [21] This is because most of the times patients neglect the initial symptoms, there is lack of a competent oncologist and referral centres.

Involvement of lymph nodes and distant metastasis relates directly to the advanced stage of the disease and has a negative impact on the overall survival of the patients. In the present study, 11 % of the cases showed nodal involvement and all patients were in stage III while in a study by Chauhan et al, 34 % of the cases had lymph node metastasis. [22]

To conclude, carcinogenesis in cancer cervix is a multistep process which begins with dysplasia, progresses to carcinoma-in situ and ends up in frank invasive malignancy. Most early lesions are asymptomatic and diagnosis can be missed at this stage if left neglected. Moreover, invasive malignancy once diagnosed affects the physical and emotional wellbeing of a woman. Therefore, the objective must be to prevent development of invasive lesions by early detection of preinvasive processes by more reliable and cost-effective screening methods. This can be achieved by spreading awareness amongst the lower section of society through measures that would help them

understand the burden of disease. However, when diagnosed with invasive malignancy, histological sub typing becomes essential as prognosis and further management depends largely on the morphological type of carcinoma.

There are few limitations of the study that include the retrospective nature and small sample size of the study.

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