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Research article

The scenario of cervical cancer in a rural medical college hospital

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ABSTRACT

The present study aims at determining the prevalence of cervical cancer in rural teaching hospital and to know the stage of the disease at the time of diagnosis and treatment of cervical cancer. It is a retrospective study of 108 cases of cervical cancer above 30 years of age. We studied during the period January 2009 to December 2010 in the department of Obstetrics and gynecology, Sri Devaraj Urs medical college, Tamaka, Kolar, India. Patients were treated accordingly to the stage of the disease. Out of 108 women, 46 (42.6%) women were in the age group 41-50. Of total 108 patients, 94.44 % were Hindus, 2.77 % were Muslims and 2.77 % Christians. The parity of majority (78) of the patients was above 3. Out of the 108 women undergoing cervical biopsy, 101 (93.51%) had squamous cell carcinoma, 6 (5.55%) had adenocarcinoma & 1 (0.92%) had adeno-squamous carcinoma. 100 (92.57) women came with stage II B and above, 6 (5.55%) women came with stage IB2 & IIA & 2 (1.85%) women came with vault recurrence. Women who came in stage IIA or less underwent Wertheim's hysterectomy which included 6 (5.55%). 100 (92.59%) had chemoradiation & 2 (1.85%) had palliative therapy. As almost all patients (92.57%) with cervical cancer were in advanced stage. High prevalence of advanced cervical cancer indicates very poor cervical cancer screening program in this area. Public education, effective cervical cancer screening strategies using PAP smear, visual inspection with acetic acid & cervical tissue sampling whenever required will reduce the prevalence of advanced cervical cancer.

Key words: PAP smear, HPV infection, Cervical cancer, Radical hysterectomy, Chemo-radiation

1. INTRODUCTION

Carcinoma cervix is the second most frequent cancer amongst women globally [1]. Developing countries like India account for about 80% of these cases. Poverty, poor hygiene, lack of regular screening programs & access to health care providers are the contributing factors for high incidence of cervical cancer in rural population. Based on the data of Population based cancer registration (PBCR), the estimated number of new cases of cervical cancer in India was 90,708 during 2007 [2].

We undertook this study at the department of Obstetrics & Gynaecology, Sri Devraj Urs University, Tamaka, Kolar, Karnataka, India, to know the prevalence of cervical cancer, clinical stage at the time of admission and treatment offered in our hospital.

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2. EXPERIMENTAL

It is a retrospective study conducted from January 2009 to December 2010. During this period one hundred and eight cases of carcinoma cervix were admitted. Detailed history was obtained and patients were staged clinically by pelvic examination. Cervical biopsy was taken to confirm the diagnosis. Ultrasonography was done and cystoscopy was performed whenever indicated. Patients were treated according to the stage of the disease either by Wertheim's hysterectomy, Chemo- radiation or both. Ethical clearance was obtained from our institute. Pregnant women are considered as exclusion criteria. Statistical test of χ^2 test was used to test the significance at 5% level of significance.

3. RESULTS

Maximum (42.6%) patients were aged between 41-50 years of age. Out of 108 patients studied, 56.48% were post menopausal and 43.51% were in reproductive period (Fig.1).

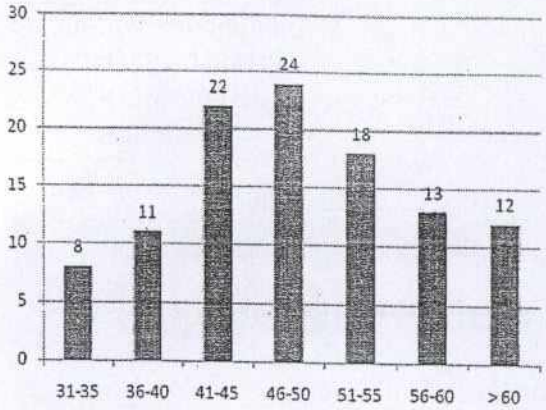

Fig.1. Age distribution in women with carcinoma cervix ($\chi^2 = 16.81$)

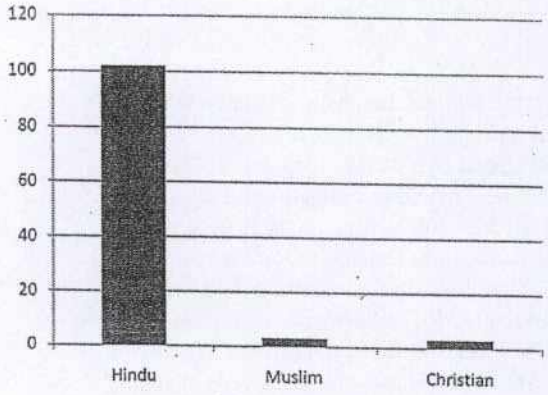

Fig.2. Distribution of patients according to religion

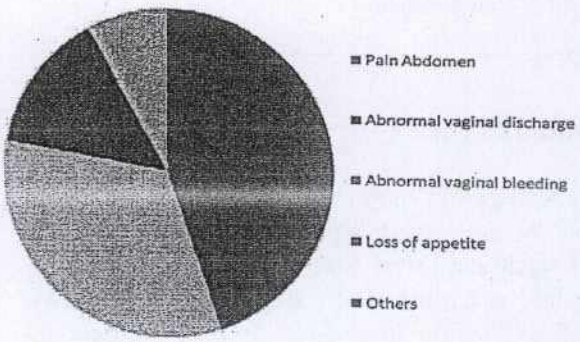

Fig.3. Presenting complaints

Table 1
Parity distribution

Parity	Number	Percentage
0	2	1.85
1-2	28	25.92
3-5	68	62.96
>/= 6	10	9.25
Total	108	100

$\chi^2 = 96.14$

Of total 108 patients, 94.44 % were Hindus, 2.77 % were Muslims and 2.77% Christians (Fig.2). The parity of majority (78) of the patients was above 3 (Table 1).

Abnormal vaginal bleeding was the most common (64.81%) complaint. Post-menopausal bleeding was seen in 47.14% women, intermenstrual bleeding in 7.14%, metrorrhagia in 34.28 and post-coital bleeding in 11.42%. Foul smelling vaginal discharge was found in 61.11 % of patients. Other complaints were pain abdomen, generalized weakness, weight loss, loss of appetite, decreased urine output and pedal edema (Fig.3). Anemia was found in 49 (45.37%), hypertension in 6 and diabetes mellitus in 4 patients. One patient had VVF. Renal failure was seen in one patient. Bronchial asthma, cardiac disease was found in one patient each. One patient was HIV positive.

Maximum (74) patients were admitted with stage III B, whereas only 5.4 % of the patients came in stage I B2 and II A which were operable (Fig.4). One patient had liver metastasis and two patients came with recurrence following surgery done outside this hospital. The status of the stage was not known and they had not received radiotherapy. Squamous cell carcinoma was seen in 101 (93.51 %) patients out of which 48 were moderately differentiated, 36 were well differentiated and 17 poorly differentiated cancers. Adenocarcinoma was seen in 6 and adenosquamous carcinoma in 1 patient (Table 2).

Cystoscopy was performed in 13 patients. Bladder infiltration was seen in 5 and ureteric infiltration in 2 patients. It was normal in 6 patients. Wertheim's hysterectomy was performed in 6 patients. Lymph nodes were found positive for malignancy in 2 patients. In 4 patients lymph nodes were negative. Five patients who underwent hysterectomy outside our hospital, were diagnosed to have carcinoma cervix on pathological examination. Further follow-up of patient was not possible as many patients did not turn up. Brachy therapy was not available in this institution, if brachy therapy was also available with external radiation in the same institution patients would have beneficial and follow-up would have been better.

4. DISCUSSION

A retrospective study of 108 patients with cervical cancer was undertaken from January 2009 to December 2010. In India 90,000 of new cases of cervical cancer occur every year [3]. Cervical cancer is one of the commonest cancers seen in our department. More than 80% of cervical cancers are locally advanced at the time of presentation [4]. Cytological screening is the mainstay of detecting cervical cancer in the pre-cancerous stage [5]. Age distribution of the patients with cervical cancer varied from 30-70 years. In our study the maximum numbers of patients were between ages 40-50 years. Advanced age at diagnosis of cervical cancer was a significant factor (P = 0.001).

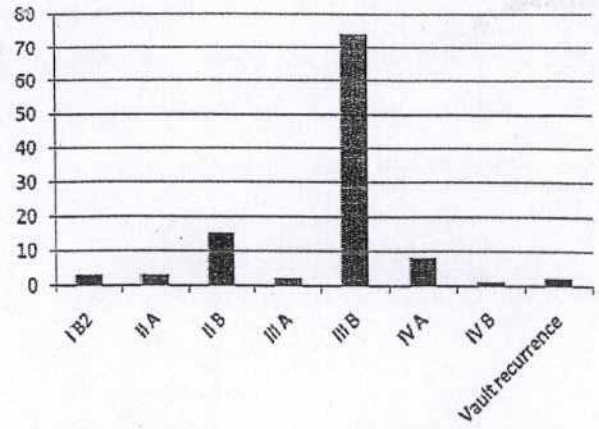

Fig.4. Stage of cervical cancer at the time of presentation

Table 2
Histopathology of cervical biopsy

Cervical biopsy	Number	Percentage
Squamous cell carcinoma	101	93.51
Well differentiated	36	35.64
Moderately differentiated	48	47.52
Poorly differentiated	17	16.83
Adenocarcinoma	6	5.55
Adenosquamous	1	0.92
Total	108	100

Table 3
Associated medical disorders

Medical disease	Number	Percentage
Anemia(Hb < 10 gm%)	49	45.37
Hypertension	6	5.55
Diabetes mellitus	4	3.70
Bronchial asthma	1	0.92
Cardiac disease	1	0.92
HIV positive	1	0.92
Renal failure	1	0.92
VVF	1	0.92
Hepatic metastasis	1	0.92

According to Novak the mean age for cervical cancer is 47 years and the distribution of the case is bimodal, with the peaks at 35-39 years and 60-64 years of age [6]. It is generally believed that in communities like Muslims and Jews who practice circumcision the incidence of Ca cervix is low. But Duttagupta *et al* [7] reported that Muslims are equally susceptible to development of carcinoma cervix. Male circumcision is one factor which may help prevent cervical cancer. But other risk factors like early marriage, low socio-economic status leading to poor hygiene, promiscuity and greater use of barrier contraception by Hindus probably offset the advantages of circumcision [8]. In our study Hindus (94.44% Vs 2.77 %) were more susceptible than Muslims.

It was seen that prevalence of cervical cancer increased with increasing parity (P<0.001), especially when it was beyond three. Most of the patients (64.81%) had abnormal vaginal bleeding as the common symptom followed by abnormal vaginal discharge, pain abdomen, loss of appetite, generalized weakness and weight loss amongst the other common symptoms.

Maximum numbers of patient (45.37%) were anemic at the time of presentation. One patient had VVF, one with renal failure and one with hepatic metastasis. Other associated medical illnesses were hypertension, diabetes mellitus, bronchial asthma, cardiac disease and HIV positive status (Table 3). Most women (76.83%) presented beyond stage III B onwards at the time of admission who were inopereable, whereas only 5.4 % of patients were below stage II A who underwent radical hysterectomy.

In our study it was seen that maximum number of patients had squamous cell carcinoma 101 (93.51 %) out of which 48 were moderately differentiated, 36 were well differentiated and 17 poorly differentiated cancers. Adenocarcinoma was seen in 6 and adenosquamous carcinoma in 1 patient. According to Mathew *et al* [9] squamous cell carcinoma represent the vast majority of cervical cancer (75-90%), increasing incidence and mortality rates due to cervical adenocarcinoma (3% per annum) has been reported in many parts of the world.

Among the women who underwent cystoscopy 5 women showed bladder infiltration, 2 showed ureteric infiltration and 6 showed no infiltration. Radio therapy remains an integral component of the standard treatment of majority of the cases [10]. All the patients beyond stage II were given external beam radiation of 50 cGy units and were distributed over 25 days in 5 days a week. Later the patients were referred to higher centre for brachy-therapy. Details regarding completion of brachy-therapy were not available.

Patients who were hysterectomised outside (5) were diagnosed to have carcinoma cervix post-operatively by histopathological examination of the hysterectomy specimen and were referred to R.L. Jalappa hospital for chemoradiation. Among them 2 patients were diagnosed to have vault recurrence after undergoing hysterectomy for early stage cancer cervix.

5. CONCLUSIONS

Early stage cervical cancer is highly curable with currently available treatment modalities, because of the long course of the disease. The high prevalence of cervical cancer in our study is due to ineffective screening programs. Routine screening is widely recommended and encouraged but our system depends on opportunistic screening of women who seek medical care and this misses out on many women, especially who may not be aware of the importance of routine PAP smear. As cervical cancer is a top killer amongst our women for genital carcinomas, all women should have regular screening of the genital tract to detect malignancy at the earliest which would give them a better life expectancy in rural area. Lastly although HPV infection plays an important role in development of carcinoma cervix, detection of HPV

virus is neither easy nor feasible in a scenario like us [11]. It is important to strengthen the radiotherapy treatment of cervical cancers.

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