Clinical patterns and treatment complications of 1000 cases of carcinoma of the uterine cervix

Tahir Azhar, MBBS, MRCP, DMRT, FFR
Lecturer and Consultant Oncologist-Radiotherapist
Universiti Kebangsaan Malaysia

Francis Lopez, MBBS, DMRT, MSc.
Consultant Oncologist-Radiotherapist
General Hospital Kuala Lumpur

Summary

One thousand consecutive cases of carcinoma of the uterine cervix treated in the General Hospital Kuala Lumpur between January 1977 to December 1979 were studied. Epidemiological breakdown by race, age, parity, occupation, stage and histology of the disease were obtained. Treatment complications in survivors available for follow-up were analysed. The Chinese had the highest incidence, followed by the Indians and the Malays. Ninety six percent were squamous cell cancers, the remaining were adenocarcinomas. Eighty percent of patients were seen at an advanced stage (Stage IIB–IV). Late radiation complications were mainly proctitis, cystitis and fistula; (5%, 7.2% and 1.4% respectively). These figures are comparable to many centres but the incidence of cystitis is relatively higher. This is believed to be related to irradiation techniques in these cases.

Introduction

The average annual registered cases of carcinoma of the cervix in the Institute of Radiotherapy and Oncology, General Hospital Kuala Lumpur is 350 cases. This figure is fairly constant from year to year. The clinical pattern for the malignancy for our local population is scarce. This study aims to gauge the problem in the local context and to assess late treatment complications related to radical radiotherapy with or without surgery.

The cure rate for cervical cancer has stabilised in the last 25 years or so. The overall five year survival rate is 50% while by stages a typical five year survival by radiotherapy is as shown in Table I.[2,3,5]

In stage I and early stage II surgery and radical radiotherapy give similar survival rates but the early and late morbidities are different.[1] For more advanced cases radiotherapy is mainly employed as the method of choice.[2]

Any treatment schedule should not compromise these cure rates; nor should it increase the morbidity, especially late complications of radiotherapy beyond the acceptable level (see Table 2).

Attempts were made in this study to establish some survival figures and the complication rates in patients treated with radical radiotherapy.

Table I

Five years survival rate for carcinoma of the cervix by stage

Stage	Brady et al.	Fletcher
I	89%	90.3%
II	64%	72.6%
III	52%	A.45% B.36%
IV	12%	14%

After Luther Brady

Table II

Late treatment complications in carcinoma of the cervix treated with radical radiotherapy

Complications	% patient no. = 125
Proctitis (severe)	4.8
Cystitis (severe)	2.4
Fistulae	1.6

After: (Brady et. al.)

Materials and method

One thousand consecutive cases of cancer of the uterine cervix seen at the Institute of Radiotherapy and Oncology General Hospital Kuala Lumpur between January 1977 – December 1979 were analysed. This large number can reasonably reflect the epidemiological pattern being sought. The study included patients treated up to the end of 1979 to allow at least a ten year follow-up of treated patients. Clinical records were used and the follow-up progress together with any complications present were noted.

All patients received radical radiotherapy to the pelvis with an external beam between 4500 cGy to 5000 cGy in 20–25 fractions using a 6 MeV linear accelerator or the Betatron at 43 MeV using only an anterior field. Intracavitary treatment was given after completion of the external beam or sometimes before. This is delivered using radium sources, Manchester style. An average point A dose of 3000 cGy is given. Patients were followed up in the Institute or at any of the state general hospitals apart from Pahang, Trengganu, Perlis and Kedah.

Eighty patients (8%) had either a simple hysterectomy or a Wertheim but due to 'inadequate cancer surgery' or positive pelvic nodes, they were referred for radiotherapy. These cases were given similar external doses of 4500 cGy followed by vaginal vault irradiation. The dose of vault irradiation was in the range of 3000–4000 cGy, delivered one cm. from the mucosa.

The complications studied were intestinal (proctitis, rectovaginal fistula, bowel perforation and bowel strictures), urinary (cystitis, vesicovaginal fistula and bladder ulcers) and miscellaneous (pelvic abscess, hemorrhage). We graded the complications into three categories:

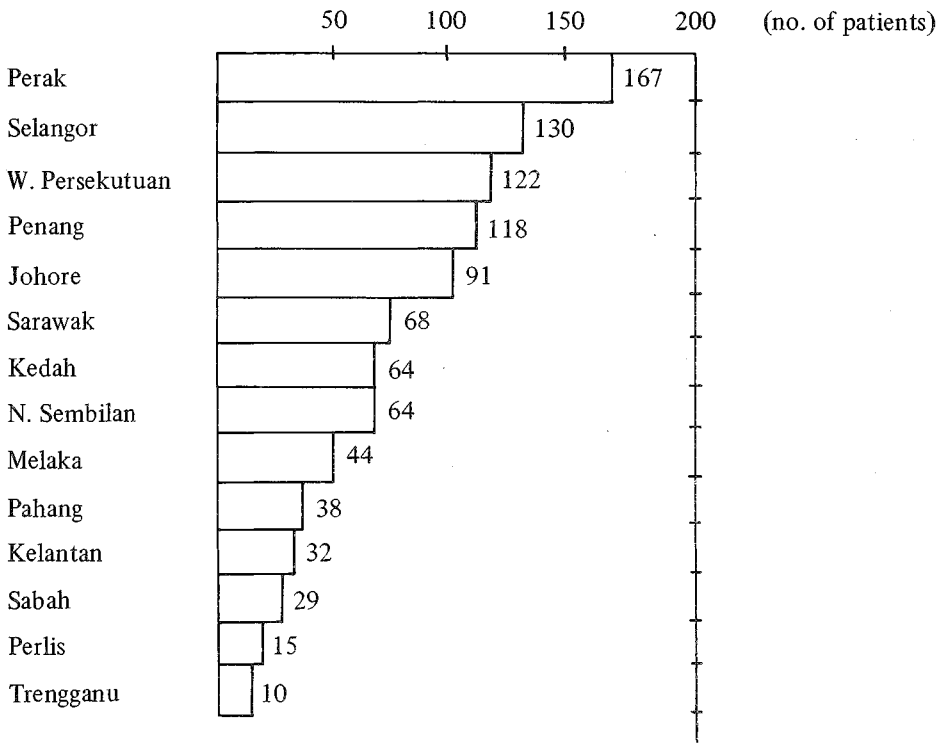
1 – Mild presence of symptoms but needing no treatment)
2 – Moderate (presence of symptoms and needing treatment, sometimes hospitalisation).
3 – Severe symptoms (presence of obvious demonstrable damage and the need for active intervention eg: colostomy etc.).

Acute complications of radiotherapy treatment were not considered since they usually resolved soon after treatment or within the following few months. Late complications however were more serious and occurred after one to two years of treatment.

Our patients were only analysed for late complications and apart from symptoms that they had, proctoscopic, sigmoidoscopic and cystoscopic examinations were carried out to assess the severity.

Results

Carcinoma of the cervix (1977–1979)
Distribution of patients by states of Malaysia



(Eight patients were referred by doctors from Indonesia)

The Chinese as a racial group constituted 61% of the cases (610 cases) followed by Malays with 184 cases (18.4%) and 177 (17.7%) Indians. Twenty nine cases (2.9%) were East Malaysian bumiputra, Eurasians, Indonesians etc.

Table III

Racial distribution of 1000 cases of carcinoma of the cervix

Chinese	610 (61%)
Malays	184 (18.4%)
Indians	177 (17.7%)
Others	29 (2.9%)
Total	1000 (100.0%)

The age distribution (Table IV) shows a peak incidence in the 5th and 6th decade which is no different from most Western series.[4] The incidence below 30 years was very low (20 cases [2%]).

Table IV

Age distribution of 1000 cases of carcinoma of the cervix

Age (years)	No.	%
<20	1*	0.1
20 – 29	19	1.9
30 – 39	137	13.7
40 – 49	300	30.0
50 – 59	317	31.7
60 – 69	181	18.1
70 – 79	43	4.3
80 – 89	2	0.2

* an 18 year old girl

Social class III & IV were the most affected group. Table V gives the breakdown showing that the low income and manual labour groups were the most affected (III & IV). Management and executive group, lawyers, doctors, engineers and similar groups were placed in Class I while the rest in group II.

Table V

Incidence of 1000 cases of carcinoma of the cervix by social class

Class	No.	%
I	0	0
II	78	7.8
III	380	38.0
IV	542	54.2

Stage distribution is as shown in Table VI below.

Table VI

Distribution by stage of 1000 cases of carcinoma of the cervix

Stage	No.	%
1B	89	8.9
2A	119	11.9
2B	310	31.0
3A	92	9.2
3B	330	33.0
4A	51	5.1
4B	15	1.5
Total	1000	100

Table VII

Parity in 1000 cases of carcinoma of the cervix

Nulliparous	1
1 – 4	335
5 – 9	604
> 10	60

Seventy nine point three percent of patients were more advanced than stage 2B. The treatment started within four weeks of referral. Squamous cell cancer was present in 96% of cases while the remaining were adenocarcinoma.

Follow up and complications

Of the 1000 treated cases, only 285 patients were available for follow-up of a minimum of one year. The longest follow-up was ten years. The median follow-up was four years. Complications rates were analysed for the 285 cases available in the follow-up and this is as presented in Table VIII below.

Table VIII

Complications of radiotherapy treatment in 285 patients

Complications	Mild-moderate	Severe
Proctitis	15%	5%
Cystitis	–	7.2%
Small bowel damage	–	–
Rectal fibrosis	–	2%
Rectovaginal fistula	–	1.4%

Discussion and conclusion

Epidemiological indices in terms of age, parity, occupation and histology of cervical carcinoma as seen in this study are no different from Western series.[4] In this study there was a relatively higher incidence in the Chinese. While this may be attributed to perhaps the better reception of this racial group to modern medicine, there can be other reasons for this. It is to be noted that Perak, Selangor, Wilayah Persekutuan and Penang contributed more than half of the cases. The east coast states of Peninsular Malaysia accounted for 80 cases only. Only a proportion of those referred to the Institute from the east coast states (70%) appeared for treatment. The main reasons were related to the constraints of distance, separation from family environment for between one and a half to two months of treatment, financial factors and of course the factor of fear of the unknown and possible misinformation about radiotherapy treatment. Survival figures cannot be obtained for this group of 1000 studied. The reason for this as has been stated earlier is the difficulty in follow-up. The major factors are the distance and remoteness of some places from follow-up centres (Kuala Lumpur, Ipoh, Penang, Malacca, Johore Bharu and Kota Bharu General Hospital). Some patients are reluctant to come because of the cancer stigma and related prejudice. Others who died or are alive cannot be traced because of movement to a different place and for those who died no feedback is made to the Institute either on a voluntary basis or otherwise.

In spite of the above problems this study provides an opportunity to study the complication rate and their pattern in the 285 cases who were followed up between one to ten years. A minimum follow up of one year is necessary to study late complication of radiation. As seen in Table VIII the rates for major complication (proctitis, cystitis and fistula are 5%, 7.2% and 1.4% respectively. The incidence of severe proctitis is comparable to a number of other centres. The high rate of severe cystitis could be due to using a single anterior betatron field technique in some cases. This technique gave adequate tumour dose but the bladder inevitably received a higher dose. This technique is not in use now and should be avoided. The majority of our patients with severe proctitis and fistula needed colostomy although some refused the procedure

and are lost to subsequent follow-up. Radiation cystitis was less aggressively treated and only symptomatic treatment offered. The real issue was to prevent these from occurring by meticulous attention to details in the delivery radiotherapy treatment.

Carcinoma of the cervix, being the most common malignancy of the female and also eminently curable when detected at an early stage, must be given unreserved emphasis on prevention, early detection and curative therapy. Cancer registry and follow-up schemes will help to verify our own treatment results and treatment complications to help improve treatment policy, dose and techniques that may be employed.

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