MANAGEMENT OF CARCINOMA OF BODY OF UTERUS

by

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There have been various changing trends in the treatment of carcinoma of body of uterus during the last 20 years and this has aroused considerable controversy in the management of these cases. In the previous paper epidemiological aspects 124 cases of carcinoma of body of uterus attending Chittaranjan Cancer Hospital, Calcutta from 1950 to 1970 have been analysed. In this paper treatment of these cases undertaken in this hospital will be reviewed and discussed.

Material and Methods

Out of 124 cases who submitted for epidemiological study, 5 were found to be in advanced stage of the disease and beyond the scope of any treatment. Another 14 cases, after all investigations, refused to take any treatment inspite of our best efforts. The rest 105 cases were treated. The methods of treatment and its results will be evaluated in this paper.

Treatment done

Table 1 shows various types of treatment given to these 105 patients.

<table>
<thead>
<tr>
<th>Types of treatment</th>
<th>No. of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery only</td>
<td>42</td>
</tr>
<tr>
<td>Surgery + Ext. Radiation</td>
<td>23</td>
</tr>
<tr>
<td>Surgery + Preoperative Radium</td>
<td>4</td>
</tr>
<tr>
<td>Surgery + Postoperative Radium</td>
<td>2</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>34</td>
</tr>
</tbody>
</table>

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Accepted for publication on 14-6-1974.

Forty-two patients were treated by surgery only. Another 23 patients had adjunctive external radiation following surgery, in 2 of them preoperative radium was given before surgery and I had postoperative radium following surgery. All 3 patients who had postoperative radium, were operated in other hospitals and referred to us for further treatment.

Out of 34 cases treated by radiotherapy, 7 patients unfortunately did not take the full course of treatment. It might be mentioned here that in the early part of 50's, the main and primary line of treatment for these cases was by radiotherapy. Three applications of radium were given, the interval between the first and second applications was 1 week and between second and third 3 weeks. In between the intervals of radium applications, external radiation was given. From 1955 onwards Subodh Mitra started doing radical vaginal hysterectomy with bilateral extraperitoneal lymphadenectomy on these cases. The present policy since then is to treat these cases by surgery wherever it is possible. Seven patients who did not take full course of radiotherapy, took either 2 or 3 applications of radium. None of them had taken any course of external applications.

Different Surgical Procedures Adopted

As stated earlier, 71 cases were operated. These can be put in 3 separate groups—

(a) Where operation had been undertaken through the abdominal route.
Where operation had been undertaken through the vaginal route.

(c) Where operation had been undertaken through the abdomino-vaginal route.

The different types of operations done on these patients are shown in Table 2.

### TABLE II

**Different Types of Operative Procedures**

<table>
<thead>
<tr>
<th>Route</th>
<th>No. of cases</th>
<th>Total hysterectomy + bilateral salpingo-oophorectomy + cuff of vagina</th>
<th>-do- + External Radiation</th>
<th>-do- + Lymphadenectomy</th>
<th>Wertheim's hysterectomy + External Radiation</th>
<th>Mitra's operation (Rad. vag. hysterectomy bilateral extra pelvic lymphadenectomy)</th>
<th>Mitra's operation + Ext. Radiation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Abdominal Route</strong></td>
<td><strong>45 cases</strong></td>
<td>23</td>
<td>15</td>
<td>6</td>
<td>1</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Vaginal Route</td>
<td><strong>10 cases</strong></td>
<td>8</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abdominal-vaginal</td>
<td><strong>16 cases</strong></td>
<td>12</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Amongst the operations undertaken through the abdominal route, cuffing of vagina was done through the vaginal route in 5 cases. In 4 cases two applications of radium were given prior to abdominal hysterectomy and no cuff of vagina was removed in these cases; 1 of them had also external radiation. Post-operative radium was applied in 3 cases where no cuff of vagina was removed, one of them had later on external radiation also. Out of 6 cases where lymphadenectomy was done in addition to abdominal hysterectomy, 1 of them had external radiation also. The patient who had Wertheim's hysterectomy in another hospital about 3 years ago, developed a hard mass in the left iliac fossa which was radiated in this hospital.

Out of 10 cases where vaginal hysterectomy with cuff of vagina had been done, adjunctive external radiation had been given to 2 cases and preoperative radium in 1 case. Out of 16 cases who had Mitra's operation, additional external radiation had been given to 4 of them and preoperative radium to one.

### Role of Lymphadenectomy

There has never been an agreement about the involvement of lymph nodes in endometrial carcinoma and estimates vary between 10 to 30 per cent. In this series 23 cases had lymphadenectomy. 7 along with abdominal route and 16 with Mitra's operation. The histological report of the nodes is shown in Table 3.

### TABLE III

**Histology of Lymph Nodes**

<table>
<thead>
<tr>
<th>No. of cases</th>
<th>Gland positive</th>
<th>Gland negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>2 (8.7%)</td>
<td>21 (91.3%)</td>
</tr>
</tbody>
</table>

Out of 23 cases, metastases in lymph nodes were found in 8.7 per cent of cases. This finding corroborates with that of Rickford (1968) who found 10 per cent involvement of nodes in a consecutive series of 50 Wertheim's operation. Winterton (1964) also found 10 per cent involvement of lymph nodes in his series. In Lees's series (1969) the incidence of lymph node involvement was 17 per cent and in Hawksworth's series (1964) 12.5 per cent.

Of 2 cases with positive nodes in this series, one had extension to isthmus without any involvement of parametrium (stage II); another was in stage I and had no extension to cervix or para-
trium. In Hawksworth's series of 8 cases with positive nodes, 5 had no extension to cervix or parametrium, 3 had extended to the parametrium and 2 of the 3 had extension to cervix also.

Recurrences and Metastases

(a) Vault and Urethra: There were 8 cases of recurrences at the vault of vagina. Two of them occurred after surgery and another two after surgery followed by external radiation. In the remaining 4 cases recurrences occurred after radiotherapy, one of whom took incomplete treatment. In the latter group metastases behind the urethra also occurred in 2 cases. No recurrence either at the vault or behind the urethra was seen in cases where preoperative or postoperative radium had been applied.

(b) Parametrium: There were 2 cases where recurrences occurred in parametrium. One of them had full course of radiotherapy and the other had abdominal hysterectomy with bilateral salpingo-oophorectomy plus removal of cuff of vagina through the vaginal route. In the latter case though cervix was free, myometrium was found to be invaded by malignant cells.

(c) Distant Metastases: Distant metastases occurred in 6 cases. In one case metastases were found in supraclavicular gland which on histological examination showed adenocarcinoma and in another case at the anorectal junction. Both of them took incomplete course of treatment by radiotherapy. Distant metastases occurred in one case 7 years after Mitra's operation on the skin of the back on the medial side of 4th and 5th lumbar vertebrae which were excised and the patient is still surviving. Metastases occurred in another case on 1st and 5th lumbar vertebrae about 7 years after total hysterectomy with bilateral Salpingo-oophorectomy plus cuff of vagina. Palliative external radiation was given and the patient is still surviving. In the remaining 2 cases metastases occurred in urinary bladder in one case and in another case on the left ischial spine following surgery and both of them died.

Five Year Salvage Rate

From 1950 to June 1969, 101 patients were treated and as stated earlier 7 of them did not take the full course of treatment by means of radiotherapy. Five years salvage of these patients is shown in Table No. 4.

The five year salvage rate according to stage of disease could not be given as large number of cases could not be classified. It may be stated that if treatment is carried out by means of radio-

<table>
<thead>
<tr>
<th>Methods of treatment</th>
<th>No. of cases treated</th>
<th>No. of survival</th>
<th>Percent of survival</th>
<th>No. of lost sight cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery</td>
<td>40</td>
<td>23</td>
<td>57.5</td>
<td>11</td>
</tr>
<tr>
<td>Surgery + Ext. Radiation</td>
<td>29</td>
<td>18</td>
<td>62.0</td>
<td>3</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>32*</td>
<td>17</td>
<td>53.1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>58</td>
<td>57.4</td>
<td>16</td>
</tr>
</tbody>
</table>

*7 patients did not take complete course of treatment.
(Corrected Salvage Rate—61.7 per cent)
therapy it becomes difficult to make the staging of the disease as we are unable to know whether tubes or ovaries are involved by the disease or not.

The five year salvage rate by means of surgery is 57.5 per cent. Unfortunately, 11 out of 40 cases could not be traced inspite of our best efforts. The salvage rate has been improved to 62 per cent where adjunctive pelvic radiation has been given following surgery. The salvage rate of operated cases including those with pelvic radiation, is 59.4 per cent (41 cases out of 69). The salvage rate by means of radiotherapy is 53 per cent, but if those 7 cases who did not take complete course of treatment are excluded, it goes up to 66 per cent (17 out of 25). The total salvage rate by all types of treatment is 57.4 per cent but if those 7 cases are excluded, the corrected salvage rate goes up to 61.7 per cent.

Hulbert (1969) reported 67.5 per cent five year salvage rate by giving adjunctive postoperative pelvic irradiation. But in this series the salvage rate has been improved by only 4.9 per cent by giving adjunctive pelvic irradiation following surgery. The overall five year survival rate in Wheham and Bean’s series (1972) was 58.3 per cent compared to 61.7 per cent of the present series. The five year salvage rate by means of surgery and also the overall salvage rate could have been improved further, had not there been so many lost sight of cases (16 out of 101). Inspite of repeated reminders those 16 patients could not be traced.

The five year survival rate of lymph node positive and negative cases are analysed and shown in Table No. 5.

<table>
<thead>
<tr>
<th>Gland positive</th>
<th>Gland negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of cases</td>
<td>2</td>
</tr>
<tr>
<td>5 year survival</td>
<td></td>
</tr>
<tr>
<td>Lost sight of cases</td>
<td>4</td>
</tr>
</tbody>
</table>

TABLE V
Survival Rate of Gland Positive and Negative Cases

<table>
<thead>
<tr>
<th></th>
<th>No. of cases</th>
<th>No. of 5 year survival</th>
<th>Lost sight of cases</th>
<th>Percentage of survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gland positive</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>Gland negative</td>
<td>20</td>
<td>12</td>
<td>4</td>
<td>60</td>
</tr>
</tbody>
</table>

It is interesting to note that both patients who had metastases in lymph nodes survived for 5 years. But the survival rate of negative node cases was only 60 per cent.

A point may be mentioned here about 8 cases of carcinoma corporis et Endocervicis which Hawksworth (1964) has drawn attention to in his article about the prognosis of these groups of cases. Out of 8 cases, 1 was in advanced stage of disease and beyond the scope of any treatment. Other 7 were treated, one of them by radiotherapy and remaining 6 cases were operated and adjunctive pelvic radiation was given to 5 of them. Of these 5 were alive at the end of 5 years and five year salvage rate is 71.4 per cent. In Hawksworth’s series, five year survival rate of these cases was 45.5 per cent only which he considered to be a depressing group but which is not so in the present series although it must be admitted that the number of cases is too small for evaluation of results.

Whetham and Bean (1972) showed a decreasing survival rate depending upon the depth of myometrial penetration. In Hulbert’s series (1969), total result for all cases with deep myometrial invasion, including the serosal involvement, was 64...
per cent. In this series there were only 9 cases who had myometrial involvement but no record could be obtained about the depth of the disease. Out of 9, three are living including one with endocervical involvement (33.3 per cent). Four patients died and on further analysis it was found that in addition to myometrial involvement one had involvement of endocervix also; another had involvement of endocervix and bladder; another had involvement of both ovaries and one tube and another had anaplastic carcinoma. Unfortunately two patients with myometrial involvement were lost sight of.

Discussion

Gynaecologists all over the world prefer to attack this disease by means of surgery. Of course it must be admitted that Kottmeier (1953) published results of treatment by means of radiotherapy which bear comparison with any types of treatment even to-day. In the early part of 50's, treatment of this disease in this hospital was mainly radiotherapy and the corrected five year salvage rate with this type of treatment is 68 per cent.

But the present trend is to attack this disease by means of surgery and 71 out of 105 cases were operated in this series. Though 45 out of 71 cases were operated through the abdominal route, the present policy is to operate through the vaginal route wherever it is possible. Of the operated, in 9 cases either preoperative or postoperative radium had been applied and in none of them any recurrences at the vault of the vagina occurred until now. The value of giving preoperative irradiation has now been questioned. Reviewing the results of preoperative irradiation, the Annual Report on the Treatment of Cancer of the Uterus and Vagina (1967) states that no conclusions as to its value are possible. Whetnham and Bean (1972) were also unable to demonstrate the advantage of preoperative radiation in the prevention of recurrences. Fortunately in this series no such recurrences at the vault of the vagina occurred after preoperative or postoperative radium applications. But it must be mentioned here that in 4 cases treated by radiotherapy recurrence at the vault of the vagina occurred and in 2 of them metastases behind the urethra also occurred. This shows that in spite of full radiation, recurrence at the vault of the vagina cannot be prevented.

Winterton (1964) did routine Wertheim's radical hysterectomy on these cases and found positive lymph nodes in 10 per cent of cases. But Winterton put a note of caution that radical hysterectomy should not be done by the surgeon doing the occasional cases. Rickford (1968) too did 50 consecutive Wertheim's operation and found positive lymph nodes in 10 per cent of cases. He drew a conclusion that "in view of low incidence of lymphatic spread in stage I cases of this disease Wertheim's operation is not indicated in the routine treatment of this disease unless the disease has spread beyond the body of the uterus". Lees (1969) has advocated radical extended hysterectomy with hemivaginectomy for these cases. The only argument against his operation is that if hemivaginectomy, dissection and cutting the lower ligamentous attachments of uterus can be done through the vaginal route why the operation cannot be completed through the same route. Lymphadenectomy of course, can be done through the extraperitoneal route in the same sitting.

In this series radical vaginal hysterectomy with bilateral extraperitoneal lymphadenectomy had been done on 16 cases.
Positive lymph nodes had been found in only 2 cases out of 23 lymphadenectomy operations (8.7 per cent).

The conclusion which can be drawn after considering all these problems including the low incidence of lymphatic spread, the present writer advocates radical vaginal hysterectomy without lymphadenectomy for the management of these cases. If histological examination proves that either cervix or isthmus is invaded by cancer cells, lymphadenectomy can be done in the next sitting after a fortnight. The question of giving adjunctive pelvic irradiation will depend on whether parametrium or lymph nodes are invaded by malignant cells or not. But the big question whether lymphadenectomy will be able to improve the salvage rate of these cases, is yet to be answered.

Summary

1. 105 cases of carcinoma of body of uterus were treated from 1950 to 1970.
2. Five year salvage rate of different types of treatment has been shown. The corrected overall five year salvage rate by all types of treatment is 61.7 per cent.
3. Five year salvage rate of 8 cases of Carcinoma Corpus et Endocervicis is 71.4 per cent. The five year salvage rate of 9 cases with myometrial involvement is only 33.3 per cent, 4 of them had involvement of other organs.
4. Lymph nodes were invaded by malignant cells in 8.7 per cent of cases.
5. The present writer advocates radical vaginal hysterectomy without lymphadenectomy for these cases. If cervix or isthmus is found to be invaded by malignant cells, lymphadenectomy can be done in the next sitting. The question of giving adjunctive pelvic radiation will depend on whether parametrium or lymph nodes are invaded by malignant cells or not.

Acknowledgement

I want to record my thanks to Dr. R. Dutta Chaudhuri, Director of Chittaranjan Cancer Hospital for his permission to use the hospital records. I also express my gratitude to Dr. L. N. Bhose for his helpful criticism. I am indebted to our statistician Mr. R. P. Ghosh for his help in preparing the statistics.

References