

EARLY COMPLICATIONS OF WERTHEIM'S HYSTERECTOMY

by

PRATIBHA R. VAIDYA,* M.D., F.C.P.S.

NERGESH D. MOTASHAW,** M.D., F.R.C.S.

and

MALINI A. DESHMUKH,*** M.D.

Wertheim's hysterectomy is the treatment of choice in our country for cases of carcinoma of the cervix—stages I and II as the facilities for radiotherapy are not so freely available. Hence it is very important to know the mortality and morbidity of this radical procedure.

Material and Methods

Eighty-four cases of Wertheim's hysterectomy done for carcinoma of cervix clinical stage I or stage II, over a period of 6 years from 1971 to 1976, are analysed in detail.

Abdominal route was used in 70 cases and perineo-abdominal route was used in 14 cases. Wertheim's hysterectomy was done by the usual technique of block dissection which includes removal of pelvic lymph glands on both sides.

Preoperative investigations and preparations were as usual. Vaginal packing was done in most of the cases. Diabetes was present in 4 cases and Bundle branch block in 1 case. Previous history of bronchiectasis was given by 1 patient. A number of patients had undergone sterilisation in the past.

*Assoc. Prof. of Obst. & Gynec.

**Hon. Prof. of Obst. & Gynec.

***Hon. Assoc. Prof. of Obst. & Gynec.

From: Department of Obstetrics & Gynaecology, K.E.M. Hospital & Seth G.S. Medical College, Parel, Bombay-400 012 (India).

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Results

The age and parity of these 84 cases are listed in Table I and Table II.

TABLE I
Age Groups

Age in Years	No. of Patients
Less than 40	32
40-45	27
46-50	7
51-60	14
61-70	4
Total	84

Four patients were below the age of 30 years and 70% were under the age of 45 years.

TABLE II
Parity Distribution

Parity	No. of Patients
0	5
1	8
2-4	30
5-7	34
More than 7	7
Total	84

Forty nine per cent of the patients had 5 or more children, but 16% were nulliparous or primiparous.

The chief complaints of these patients (84 cases) are listed in Table III. The

total is more than 84 as many of the patients had more than one complaint.

TABLE III

Chief Complaints (Carcinoma of Cervix)

Chief Complaint	No. of Patients
Leucorrhoea	45
Menorrhagia	17
Metrorrhagia	27
Polymenorrhoea	1
Postmenopausal bleeding	17
Postcoital bleeding	9
Pain in abdomen or back	4
Pruritus vulva	2
Prolapse	3
Asymptomatic	3

Leucorrhoea was the commonest complaint present in 53% of the cases. Menstrual abnormality was present in 71% of the cases. Metrorrhagia was the commonest menstrual abnormality.

Nutritional status of these patients is listed in Table IV. Most of the patients were having haemoglobin more than 10 gms%. The least number of cases with severe anaemia in this series is due to better general treatment available to the society from various clinics all over the country.

TABLE IV

Nutritional Status and Haemoglobin %

Nutritional Status and Haemoglobin %	No. of Patients
Hb more than 10 gms. %	58
Hb 8.1 to 9.9 gms.	16
Hb less than 8 gms.	10
Total	84

The per speculum findings in this series is shown in Table V.

The uterine size in these cases is listed in Table VI.

The duration of pregnancy was 10 weeks, 20 weeks, 22 weeks and full term in these 4 cases. Two mid-trimester preg-

TABLE V

Per Speculum Findings (Cervical Appearance)

Cervical Appearance	No. of Patients
Cauliflower growth	39
Ulcerative growth	16
Erosion cervix	21
Induration of cervix	2
Ballooning of the cervix	2
Normal cervix	4
Total	84

TABLE VI

Uterine Size

Uterine Size	No. of Patients
Normal	62
Bulky	13
Atrophic	5
Pregnancy	4
Total	84

nant uteri were removed intact at the time of Wertheim's hysterectomy. Hysterectomy was followed by per-neo-abdominal Wertheim's in 1 case. Whereas the full term patient delivered per vaginam normally and then was subjected to Wertheim's hysterectomy after 3 weeks.

Fibromyoma in uteri were present in 3 cases and 1 patient had a pyometra of 10 weeks size. The other uteri were bulky due to myohyperplasia.

The histopathological type of carcinoma is described in Table VII.

TABLE VII

Type of Carcinoma	No. of Patients
Squamous cell carcinoma	76
Adeno carcinoma	3
Micro invasive type of carcinoma	4
No invasive carcinoma on hysterectomy specimen	1
Total	84

Squamous cell carcinoma was the commonest type. All cases of microinvasive carcinoma were picked up by cytology and confirmed by biopsy. In 90% of the cases the histology showed grade II according to Broder's classification. In 1 case the histology of the surgical specimen showed no carcinoma.

Clinically all the cases were stage I or II. The final staging on the operation table was as follows:

TABLE V. II
Surgical Staging

Surgical Staging	No. of Cases
Stage I	28
Stage II-A	33
Stage II-B	16
Stage III	3
Stage IV	4
Total	84

The disparity between the clinical staging and surgical findings were present in 8 cases. The surgical staging was more in 7 cases and less in 1 case. Anterior exenteration was done in 2 cases. Abdomen was opened and closed in 2 cases of stage II.

The lymph nodes were removed in all the cases. The histopathology report of the lymph nodes is summed up in Table VIII. The lymph nodes were excessively adherent and could not be removed in 3 cases.

TABLE IX

Lymph Nodes —		No.
	Negative	35
	Positive	24
	Unknown	25
	Total	84

Table X summarises the blood transfusions in these cases during operation or in the immediate post operative period.

TABLE X

No. of Blood Units	No. of Patients
0	3
1	18
2	26
3	17
4	13
More than 4	7
Total	84

In most of the cases 2-3 units of blood (350 cc each) were used. More than 10 units of blood was used in 2 cases of cardiac arrest. No blood was used in 3 cases mostly because it was not available and plasma and plasma expanders were used.

TABLE XI (a)

Early Complications During the Operation

Complication	No. of Cases
Accidental cut down of brachial artery	1
Cardiac arrest	1
Ureteric injury	5
Difficult dissection	5
Excessive bleeding	9
Injury to rectal fascia	1

TABLE XI (b)

Early Complications Post Operative Complications

Complications	No. of Cases
Mortality	4
Bleeding per vaginam	1
Pulmonary embolus	2
Myocardial infarction	2
Postoperative paralytic ileus	3
Wound infection	5
Intestinal obstruction	2
Fever above 100.4°F.	30
Urinary infection	14
Ureteric fistula	3
Neurogenic bladder	4
Incisional hernia	1

As some patients had multiple complications and 45 cases (53.5%) had some complication. Most of the cases of fever or urinary problems had urinary infection.

Accidental cut down of brachial artery during venesection required end to end anastomosis. Cardiac arrest occurred in 1 case on the table during the operation. There was excessive bleeding from the pelvic veins. Abdominal packing was required which was removed on the 3rd postoperative day. A total of 13 blood transfusions were given. The patient was revived but developed uretero-vaginal fistula on the 21st day. This was a case of micro-invasive carcinoma.

Ureteric injury occurred in 5 cases. In 3 cases reimplantation of ureter was required. This was done in the bladder in 2 cases and in the sigmoid colon in 1 case. The ureter was just accidentally clamped and released immediately in 2 cases and one of these developed fistula later. One patient of reimplantation of ureter into the bladder also developed uretero-vaginal fistula and urinary infection. Cystoscopy one month later after the operation revealed blocking of right ureteric orifice and patent left ureteric orifice. New ureteric orifice was seen. There was no V.V.F. on post-operative I.V.P. All these ureteric fistulas healed spontaneously.

Difficult dissection was mostly due to adherent bladder or rectum or some infiltration of the ureteric canal making the ureteric dissection difficult.

Excessive bleeding occurred in 9 cases. However, continuation of abdominal packing was required in 1 case and vaginal packing was done in 1 case. In 2 cases this excessive bleeding was from the rectal wall and fascia.

Injury to the rectal wall in 1 case required suturing.

Postoperative mortality occurred in 4 cases. One patient expired on the 3rd postoperative day due to paralytic ileus and pulmonary oedema. This was a case of stage II-A carcinoma. All the other 3 cases expired on the day of the operation. One case of micro-invasive carcinoma had previous history of bronchiectasis and developed myocardial infarction. The other patient, stage II-B was diabetic requiring 20 units of insulin/day. There was brisk haemorrhage from deep pelvic veins. Vaginal packing was required. She developed haemorrhage in the immediate postoperative period and also developed blood clotting disorder. Bleeding and clotting time was normal preoperatively. The patient received 5 blood transfusions postoperatively and 3 Fibrinogen units equivalent to 6 gms. In spite of all resuscitative measures she expired within 3 hours of the operation. The 4th patient developed distension of abdomen and fall of B.P. in the immediate postoperative period. Re-exploration was done immediately after 2 hours from the closure of the abdomen. Abdomen was full of blood with all raw area oozing profusely but no active bleeder seen. Ligation of anterior division of internal iliac was done on both sides but the oozing did not improve. The clotting time was 9 minutes but the blood clot dissolved after 12 minutes. Totally the patient received 10 units of blood and 6 gms. Fibrinogens but expired after 8 hours from the first operation.

Moderate bleeding per vaginam postoperatively in 1 case was controlled with packing. Pulmonary emboli in 2 cases were treated with conservative measures.

One patient of myocardial infarction improved. The other case expired and is described above. Two cases of paralytic ileus responded to conservative measures and the third is described in the mortality.

Postoperative wound infection required suturing in 1 case. Gaping of wound involving $\frac{1}{2}$ the incision was present in the other case.

Postoperative intestinal obstruction in both cases responded to conservative measures. Residual urine, more than 100 cc, was present in 4 cases after 21 days postoperatively and one of these patients required to stay in the hospital for three months postoperatively for this problem and had 250 cc of residual urine on discharge at such a late date.

Discussion

Radical hysterectomy is a very valuable and effective treatment in Gynaecological Oncology. The operation appeals to the pelvic surgeon as an exciting challenge.

A number of authors (Greiss *et al*, 1961; Currie, 1971; Rampone *et al*, 1973; Rutledge, 1974) have described combined treatment of carcinoma cervix with preoperative radium insertion followed by radical hysterectomy. Preoperative radium was used in only 5 of our patients as it was not available in the hospital. Postoperative irradiation was given to our cases if the lymph glands were positive or if the surgeon felt that some cancerous tissue is left behind.

Better anaesthesia, blood transfusion and other accessories to the operation and judicious selection of cases have lowered the operative mortality (Bonney 1952). The morbidity, mortality and complication rates are inversely proportional to the experience of the Surgeon (Telinde, 1970).

The operative mortality was 1.2% in Currie's series, 4% in Masterson's series, 2.8% in Scotto and Manhan's series and 4.7% in the present series. Obesity, pelvic inflammatory disease, endometriosis and metabolic disorders are associated with high complication rates.

Urinary fistulae, infection, problem of neurogenic bladder, pelvic infection, wound problems, thrombophlebitis and pulmonary complications form the bulk of the morbidity. Injury to a pelvic vein predisposes to thrombophlebitis.

Piver *et al* (1972) have divided the procedure of extended hysterectomy for women with cervical cancer into 5 classes. The radical operation in this series is equivalent to class III of his classification. Only 20% of patients from this class in his series were free of complications.

Proper care of the bladder and ureters is very important (Feroze, 1971). V.V.F. occurs in 3-7% of the reported cases. Ureterovaginal fistula is reported in 2-13% of the cases (Telinde, 1970). The fistula rate is 1.4% in Currie's (1971) series, 12% in Masterson's (1963) series and 3.5% in the present series. There was no case of V.V.F. The incidence of urinary fistulae is doubled in patients receiving prior radiotherapy.

27.6% of the cases reported by Scotto and Manhan (1975) could not void urine normally at 2 months postoperatively. This problem occurred in 4.7% of our cases.

Perineo-abdominal approach for radical hysterectomy eases the separation of bladder and rectum (Howkins, 1968). This approach was used by some of our surgeons only. Among these 14 cases, 3 were of Stage I, 10 were of Stage II, and 1 was having Stage III cervical carcinoma. One of these patients was pregnant.

The incidence of positive lymph glands is reported as 29.7% by Currie (1971) and 22% by Kelso and Funnel (1967). The survival rate is directly related to the metastases in the glands. The histopathology report could be traced back in only 57 out of these 84 cases. Among them 61% had negative glands and 39% had cancerous deposits in the glands on microscopic examination. All macroscopically enlarged glands were not necessarily positive.

Surgical management of invasive carcinoma of cervix in pregnancy is reported by Thompson *et al* (1975). All our 4 pregnant women have done well without having any special problem.

Summary

1. Eighty-four cases of Wertheim's hysterectomy are reported in detail. Perineo-abdominal approach was used in 14 cases. Four patients were pregnant.

2. The operative mortality rate was 4.7% and the morbidity rate was 53.5%.

3. There was no case of V.V.F. Ureteric fistula occurred in 3.5% of the cases.

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