

# WERTHEIM'S HYSTERECTOMY

(Preliminary Communication)

by

SUKUMAR MITRA,\* M.D. (Pat.), M.R.C.O.G.

and

SURYAMONI DEVI,\* M.D. (Pat.), M.R.C.O.G.

From May 1963, cases of carcinoma of cervix were treated surgically by radical Wertheim's hysterectomy in this department. Seventy-six cases have been operated on so far, and it is now possible to review the cases operated in 1963. All the cases of 1963 could be traced although some replied by post. The number of these cases were few but the results were encouraging. In the subsequent years the anaesthesia technique was changed and the operation steps were little extended. The comparative study of these modifications will be the subject of communication in coming years. The initial impression of the series are recorded here and the technique followed in 1963 is described.

## Material

Number of cases seen in 1963	67
Number operated	8
Operability rate	12 per-cent

The operability rate did not improve significantly even in 1968 although people in adjoining districts know that surgical treatment of fe-

\*Dept. of Obst. & Gynec., Medical College, Burla, Sambalpur, (Orissa).

Received for publication on 27-1-1968.

male genital cancers is carried out in this centre.

## Age, parity and blood group of operated cases

Case No.	Age	Parity	Blood group
1	36	12	0
2	27	5	0
3	40	5	records not readily available
4	28	1	0
5	36	6	0
6	50	4	0
7	42	6	0
8	43	5	0

In the general population here, those of blood group 0 were 42 per cent in 1963.

All the primary growths were epidermoid carcinoma.

## Anaesthesia

All the cases were operated under spinal (Nupercaine), supplemented by general anaesthesia. The lymphadenectomy part was completed under spinal effect, the hysterovaginitomy part under general anaesthesia.

There were no deaths from anaesthesia or operation during the year. Case no. 2 developed lymphocyst on

*Clinical staging, lymph node involvement and five-year result*

Case no.	Stage	Nodes involvement	Five year result
1.	q II	Not involved	Recurrence on vault after one year. Locally excised. Recurred after one year. Died in 4th year after Wertheim's
2.	II a	(Left internal iliac, right internal and external iliac, & obturator)	Surviving more than five years
3.	II b	Not involved	"
4.	II a	Involved (Group not mentioned)	"
5.	I	Not involved	"
6.	II b	(Groups involved: left and right obturator; isolated parametrial node)	Died 4 years after operation. Cause not known
7.	II b	Squamous cells in lymph sinuses (left lower lateral external iliac)	Surviving 5 years
8.	II b	(Right—lateral and intermediate external iliac, internal and common iliac; left—lower lateral and intermediate external iliac, Cloquet's)	"

the left side three months after the operation which was excised. Case no. 3 developed a ureterovaginal fistula 17 days after the operation. This closed spontaneously 7 months after the operation.

Two out of the eight cases gave a history of cauterisation of the cervix in the recent past, case no. 2 three months and case no. 5 one year before operation.

All the five cases with node metastases were advised to have Cobalt treatment after operation.

*Operation technique*

The technique followed in this series was that of David Currie of Leeds, England.

Vagina is packed tightly with roller gauze.

Incision—Left paramedian infra-umbilical.

The broad ligament space is opened widely and the ureter is dissected out all along its course in the pelvis above the ureteric canal. It is held with a loop of moistened ribbon gauze for traction. Lymphadenectomy (first on the right, then on the left side): the nodes are dissected in groups and not en bloc (Fig. 1).

The nodes looked for and removed are:-

(i) Middle lateral and lower lateral external iliac

(ii) Cloquet's and medial external iliac (abnormal obturator vein is not tied as a routine as is done by Currie).

(iii) Intermediate external iliac.

(iv) Obturator group and small

unnamed nodes in fossa on pelvic floor.

(v) Upper lateral external iliac and common iliac (groups above common iliac are explored as a routine and removed if palpable. The artery and the vein from the bifurcation of aorta to inguinal ligament are stripped of their surrounding fascia).

(vi) Cleaning of obliterated hypogastric artery and dissecting hypogastric group. Superior vesical branch is isolated and preserved. Hypogastric artery distal to superior vesical is not cut and tied as is done by Currie. The uterine artery is secured at its origin. The hypogastric artery is completely excised if suspected to be involved in infiltration.

(vii) Internal iliac nodes medial to internal iliac stem.

(viii) Sacral nodes embedded in fat between common iliac vessels and upper rectum are located by palpation and dissected out.

The obturator fossa is packed with moist roller gauze and lymphadenectomy of the left side is carried out.

#### *Hysterovagnectomy*

The peritoneum with underlying cellular tissue lateral and close to the rectum are clamped, cut and tied from the brim of the pelvis to the level of uterosacrals. The peritoneum of the pouch of Douglas is cut at least one inch from the cervix in the midline. By digital dissection, one and sometimes two parametrial bands can be artificially created posterolaterally and laterally. These are secured close to the pelvic wall and cut. Usually, three successive clampings are necessary from the upper

border of uterosacrals to the level of the pelvic floor. It is safer to take smaller lengths of tissue in three successive clamps. The uterus and the ureters can now be lifted up and rectum can be separated from the posterior aspect of vagina upto the level of the pelvic floor by digital dissection.

The anterior peritoneum over the uterovesical pouch is now incised and bladder pushed down in the middle with scissors. The pillars on two sides stand out. A blunt pointed scissor is used to loosen the ureter from its attachment to the lateral and anterior walls of the tunnel. The posteroinferior wall breaks down during dissection. This step is facilitated if the uterine artery (cut uterine end) is tied long and is pulled up. Laterally the wall of the ureteric tunnel merges down into the paravesical cellular tissue inferior to the superior vesical artery (Fig 2). This block of tissue is cut from the bladder margin lateral, anterior and medial to the ureter. The ureter is now visible in its entire course in the tunnel and needs only pushing down and cut with scissors. As the terminal ureter is kept away laterally, the paravaginal tissue below the ureter stands out curving from the vaginal to bladder margin. This is clamped close to bladder with long straight artery forceps, cut and tied. Usually three sets of clamps are required to reach the level of midvagina. A long bladed retractor is useful at this stage. The final steps become easier if the pack in vagina is removed. The vagina is clamped below the level of the growth and pulled up and cut at midvagina level. The lower vagina

is cleaned with antiseptic and closed with interrupted sutures. A gauze wick drain is left in the middle, to be removed after 24 hours. The area is peritonised loosely and the abdomen closed.

There is no risk of unwarranted haemorrhage in this technique. However, those steps where blood loss of even slight amount is encountered, are mentioned below.

(i) During removal of the lower lateral external iliac node, a small twig of artery will be snapped in its bed on the muscle which can be tied or oozing arrested by pressure.

(ii) A small venous tributary usually crosses the distal part of external iliac artery anteriorly to join the corresponding vein. This should not be damaged during stripping of the vessels of their fasciae.

(iii) Vigorous search for Cloquet's node in the femoral canal may damage the inferior epigastric vein.

(iv) The abnormal obturator vein, which may not be called abnormal because of its fair constancy, is likely to be injured. The lymph trunk from the Cloquet's to medial external iliac node passes deep to it.

(v) The obturator artery may be stripped or a vein in the obturator fossa may be opened up when a large obturator node is blindly pulled up.

(vi) When dissecting an upper lateral, external iliac node a direct small twig from the external iliac artery may have to be secured.

(vii) The common iliac node on the right side is usually seen as a flattened piece of tissue over the common iliac vein, the margin of which projects out half an inch lateral to

common iliac artery. Care is necessary while removing the node.

(viii) The sacral node dissection is easy but at times is associated with little blood loss if presacral vessels are damaged.

(xi) The middle set of parametrial clamps usually includes large veins from rectum. This clamp and ligature should not slip.

(x) The greatest nuisance as regards haemorrhage is encountered while dissecting the terminal ureter. A constant venous trunk runs down the lateral margin of the vagina. One of its tributaries passes across laterally to the medial side below the ureter. This vein should be secured.

The operation can be fairly clean, which can be judged from the fact that on an average 800 ml. blood were transfused to each of the cases in this series during the operation, the operation time being 4 hours.

#### *Comments*

The series was started with some planning and that has not yet been changed. All the cancer cervix cases of the two units were pooled and the operability was judged by one of us (S.M.). No cases were rejected on grounds of poor health or obesity. All the cases were operated upon by one of us (S.M.), assisted in almost all cases by the other author. This decision was adopted because considerable variation in judgement as regards clinical staging was noted, and individual difference in technique may influence the over-all results. This point is considered by us to be one most important single factor affecting the ultimate results.

It was also planned that all cases having node metastases should have supplementary Cobalt therapy. Unfortunately, majority of them could not get the treatment, in fact none of the five 1963 cases had it. Some of this group in subsequent years availed of the combined therapy; comparative results will be communicated in due course. The decision to advise postoperative full dose Cobalt therapy was taken on the mere assumption that the combined treatment might improve the results of node positive cases, which are uniformly poor in all reported series.

Kaser (1967) reported a large series drawn from three periods. Cases of Stage I and II were operated, the operability rate was 25 per cent. Postoperative radiation was given to all node positive cases. He advocated variation in technique, limiting surgery considerably in microinvasive stage I cases, possibly to reduce mortality and morbidity, and also on the conviction that extension beyond the cervix might be uncommon in such cases. There is some difficulty in limiting surgery in cancer cases; variation in operative steps may make comparisons difficult, and also many unskilled surgeons may be tempted to take up cancer surgery.

Kelso and Funnell (1967) reported a series which was well followed up. Their selection was liberal and they laid down rigid criteria of cure. All the cases were operated by either of the two authors, and postoperative radiation was given as a routine to all cases.

Parker *et al* (1967) reported a series which included cases operated upon by many different surgeons,

including less experienced resident staff. The operability rate was 15 per cent upto 1956. The operation was abandoned if bilateral or multiple nodes were found involved with carcinoma in the frozen section. We cannot agree with this decision because in our series some cases with multiple bilateral node involvement are surviving over 1 to 3 years. Two of the 1963 cases (Nos. 2 and 8), who had multiple bilateral node involvement, are now living for five years. They did not have postoperative radiotherapy.

A detailed discussion on node involvement and prognosis cannot be made because the cases in 1963 were very few. It is generally recognised that if the nodes are involved, the five-year survival rate is reduced by half, stage for stage. In our 1963 cases five had node metastases. In the first three cases all the nodes removed were not sectioned, and two of the three were reported to have no metastases. Again, after routine examination of all the nodes was started the number of sections which were examined from each node was not more than two. It has to be seen whether when multiple sections are examined the incidence of node metastases will go up. Judging from all these facts we have not yet been much disappointed with our results in node positive cases.

Parker *et al* (1967) quoted Morton to say that metastases to the nodes may be clinically noted several years after the primary operation. However, in their series, 47 per cent of those who died of cancer recurrence lived less than 2 years. Our experience in cases operated upon

up to December 1967, has been that those with recurrence in the pelvis returned within a year of operation. Recurrence at distant sites has been noted after one year, the pelvis remaining free. On this conviction we have operated on a case of post-Wertheim's vesico-vaginal fistula, who had bladder involvement, after she remained clinically free from cancer in pelvis for one year (Mitra and Devi, in press). We believe upto now that a late recurrence would be more often seen in those cases who are irradiated after the operation. Our experience with recurrence so far is that in the majority, the site is on the pelvic wall. Perhaps, incomplete removal of infiltrated parametrium would be the cause of such recurrences rather than leaving behind an infiltrated node by mistake.

We mentioned in the technique that we remove the nodes in groups. If cancer cells were freely moving about in lymph channels the overall result would have been worse.

So far, 76 cases have been operated upon with 4 deaths; one of cardiac arrest on table, one definitely and one possibly of blood transfusion reaction, and the fourth due to peritonitis. In this last case part of rectum and bladder were removed with reimplantation of ureter on one side. The growth had spread much more posteriorly than could be judged clinically.

#### Summary

The technical details of Wertheim's hysterectomy and the initial impres-

sion of the results are recorded. Eight cases, who were operated 5 years or more ago were observed. There was no operative death. One was Stage I, lymph node not involved, and is living. Seven were Stage II, two without node metastases and five with. Out of the former one is living, and out of the latter four are well. The result is encouraging to permit us to continue the treatment.

The incidence of node metastases in this small group is too high. There is a scope to extend histopathological investigation in these cases to ascertain more correctly the extent of spread of carcinoma. The high incidence of Group 0 in the operated and surviving cases is noted with interest.

#### Acknowledgements

We thank the Superintendent, Medical College Hospital, Burla, for permission to use the case records included in the series. Thanks are also due to Dr. A. Sahu, house surgeon of the department, for the illustrations.

#### References

1. Kaser, O. (1967): Fifth World Congress of Gynaecology and Obstetrics, Sandorama, p. 29, 1967.
2. Kelso, J. W., and Funnell, J. W. *Am. J. Obst. and Gynec.*, **99**: 106, 1967.
3. Mitra, S. and Devi, S.
4. Parker, R. J., Wilbanks.: *J. Obst. Gynec. Ind.*, **19**, 119, 1969. G. D., Yowell, R. K., and Carter, F. B.: *Am. J. Obst. Gynec.*, **99**: 933, 1967.

---

*See Figs. on Art Paper II and III*