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Surgical Treatment of Female Genital Cancer

by

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INTRODUCTION

Surgery has a definite and very important place in the treatment of female genital cancer. It may be used as a preventive, curative or palliative measure. Its indication and extent depend on the following factors:-

1. the nature, site and extent of the lesion,
2. the presence and nature of any associated complications,
3. the age and general condition of the patient, and
4. the availability and desirability of, and the response to, other forms of treatment such as radiotherapy and chemotherapy.

PRINCIPLES AND LIMITATIONS

Whilst radiotherapy and chemotherapy aim at complete destruction of cancer cells, surgery is done for the purpose of removing them. In order to be effective, therefore, surgery must be sufficiently extensive to include the removal of all cancer cells, and this preferably in one whole mass.

It is difficult, if not impossible, to remove all cancer cells once they have spread beyond the primary site. Distant metastases are often beyond the reach of the scalpel and cancer cells in the lymphatics and lymph nodes can hardly be completely removed. A macroscopic dissection of a microscopic extension can never be satisfactory. And hence, surgery has its greatest value in the treatment of female genital cancer when the cells are still confined to the primary site or, even better still, before they have invaded the underlying stroma. It is important to emphasize, even at the outset, that better results in the treatment of female genital cancer cannot be achieved by resorting to more and more extensive surgery but that the solution lies in early detection and thus early treatment.

INDICATIONS

1. Prophylactic

Bilateral salpingo-oophorectomy and total hysterectomy should be performed in preference to more conservative procedures such as ovarian cystectomy and myomectomy in the treatment of benign ovarian and uterine neoplasms in women who are over 45 years of age. As carcinoma of the cervix is by far the commonest cancer of the female genital tract and as carcinoma of the cervical stump cannot be satisfactorily treated, subtotal hysterectomy should never be done. Vaginal hysterectomy and repair rather than Manchester operation should be performed in women who are postmenopausal or who have had enough children.

Intra-epithelial or preinvasive carcinoma or carcinoma-in-situ of the cervix may be detected by routine cytological screening and confirmed by cone biopsy. Extended hysterectomy should then be performed in those patients who have had enough children.

Similarly, total hysterectomy should be advised for hydatidiform mole if the patient has had three or more children.

2. Curative

Inadequate though it may be, surgery is still the method of choice in the curative treatment for invasive carcinoma of the vulva, uterine corpus, Fallopian tube and ovary. If at all feasible, radical vulvectomy should be performed for carcinoma of vulva, extended hysterectomy and bilaterial salpingo-oophorectomy for carcinoma of uterine corpus and bilateral salpingo-oophorectomy, total hysterectomy and omentectomy for carcinoma of tube and ovary. Surgery may be preceded by radiotherapy in carcinoma of uterine carpus and followed by radiotherapy and/or chemotherapy in carcinoma of ovary.

Everything being equal, radiotherapy is the method of choice in the curative treatment of carcinoma of cervix, vagina and urethra. Surgery in the form of Wertheim operation and exenteration, however, may have to be resorted to under the folowing circumstances:-

(a) cases which are resistant to radiotherapy,
(b) cases which recur after a full course of radiotherapy,

(c) cases which are complicated by ovarian cyst or pelvic inflammatory masses, and
(d) patients who prefer to have the cancer removed and those to whom the diagnosis of malignancy must be concealed.

Adenocarcinoma, pregnancy and stenosis of vagina are also considered by some to be contra-indications to radiotherapy.

While chemotherapy has become the mainstay in the treatment of choriocarcinoma, surgery has still an important role to play. Symptoms and signs suggestive of persistence of a primary growth in the uterus despite chemotherapy should demand a total hysterectomy which should be performed under continuous chemotherapeutic cover. Solitary lesion in the lung, brain or kidney may also be successfully treated by surgical removal.

3. Palliative

Palliative surgery may be carried out in cases where the cancer is too advanced for there to be any hope of curing it or where it recurs after radiotherapy or surgery. As much carcinomatous tissues as possible may be excised in a case of incurable ovarian carcinoma whilst electro-coagulation or exenteration may be performed for incurable vulval, vaginal or cervical cancer. The surgeon, however, must not be over-enthusiastic, otherwise more harm than good may be done to the patient.

4. Symptomatic

Sometimes surgery may be required to relieve symptoms which are produced by the cancer or by its treatment. Presacral neurectomy and cordotomy or leucotomy may be done for visceral and somatic pain respectively. Implantation of ureters into the rectum, colon or a loop of ileum and colostomy may be performed for urinary and faecal incontinence.

COMPLICATIONS

Whilst postoperative complications, immediate and remote, are uncommon following relatively simpler surgical procedures, it is to be expected that they are more frequent and serious after more radical operations. These complications — shock, haemorrhage, infection, venous thrombosis and those affecting the urinary tract, gastro-intestinal tract, respiratory tract and abdominal, vaginal or vulval wound — have been, and can indeed be further, reduced by: —

(a) better pre-operative care which should include the correction of anaemia, malnutrition and infection, and the exclusion of any abnormalities by chest radiography, intravenous pyelogram, cystoscopy and sometimes even gastro-intestinal x-ray studies,
(b) better anaesthesia,
(c) adequate blood transfusion,
(d) better surgical technique, and
(e) better postoperative care which should include the maintenance of water and electrolyte balance and demand constant and meticulous nursing supervision.

The commonest complications following Wertheim operation are urinary tract infection and vesico-vaginal or uretero-vaginal fistula. The incidence of the latter varies from 2.5 per cent to 15 per cent with an average of about 10 per cent. Some of the complications which occur with surgery and radiotherapy are listed in the following table (Table I, Sherman, 1963): —

Table I

Complications occurring with surgery and radiotherapy

Complication	Primary Wertheim Procedure*	Primary conventional radiation*	Primary supervoltage radiation*
Severe bladder complications	5	8	6
Vesico-vaginal and uretero-vaginal fistulae	10	2	1
Hydronephrosis	4	3	2
Severe bowel complications	1	10	20
Recto-vaginal fistulae	$<$ 1	2	5
Pelvic abscess	2	1	1

* Incidence expressed in per cent.

RESULTS

The results of prophylactic surgery are of course good; but those of curative treatment for invasive female genital cancer are unsatisfactory, as shown in Table II. This is not unexpected as surgery depends for its success on the complete removal of all cancer cells, and this is possible only if all the cancer cells still remain localised. The results are, therefore, badly affected by the presence of local infiltration, lymph node involvement and distant metastasis.

Table II

Results of Surgical Treatment

	Five-year Survival Rates (per cent)
Carcinoma of Ovary	10 — 35
Carcinoma of Uterine Corpus (operable cases)	66 — 87
Carcinoma of Cervix (Stage I & early Stage II)	76 — 80
Positive lymph nodes	30
Carcinoma of Vagina	5 — 30
Carcinoma of Vulva	65 — 75
Positive lymph nodes	40

Five-year survival rates after surgery for ovarian cancer vary from 10 to 35 per cent. Those after surgery for carcinoma of the uterine corpus are better and range from 66 to 87 per cent in recent years. One must, however, remember that some cases, when first seen, were already too advanced and therefore inoperable. Wertheim operation is feasible only in relatively early cases of carcinoma of cervix (Stage I and early Stage II) and thus gives 5-year survival rates which may be as high as 76 to 80 per cent. These are reduced to about 30 per cent when the lymph nodes are involved. Exenteration operations carry a high operative mortality of 17 per cent and yield a 5-year survival rate of only 17 per cent. Five-year survival rates for primary vaginal carcinoma vary from 5 to 30 per cent whilst those of radical vulvectomy for carcinoma of vulva from 65 to 75 per cent. When the lymph nodes are involved, the latter percentages fall to 40.

SUMMARY AND CONCLUSIONS

1. Surgery has a definite and important place in the treatment of the female genital cancer.
2. The principles and limitations of surgical treatment are briefly discussed.
3. Surgery may be performed for prophylactic, curative, palliative or symptomatic purpose.
4. Some postoperative complications are listed and briefly discussed.
5. The results of surgical treatment are unsatisfactory and further emphasize the importance of early detection and thus early and adequate treatment of the early, and preferably pre-invasive, lesion (Chan, 1965).

REFERENCES

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