

SURGICAL TREATMENT OF ADVANCED CARCINOMA CERVIX

by

B. N. CHAKRAVORTY,* M.O. (Cal.), M.R.C.O.G. (Lond.)

Introduction

In the absence of a suitable alternative therapy, pelvic exenteration has become more or less an accepted method of treatment for advanced carcinoma of cervix. It is no longer regarded as a palliative procedure, since cure rate though small, is quite substantial for those patients who otherwise are believed to be incurable by less radical methods and yet have survived many years following this ultra-radical surgery.

The objective of this presentation is to review the results obtained in 41 cases of pelvic exenteration performed for advanced carcinoma of cervix at the Gynaecological centres of Bengal Medical College and N. R. S. Medical College, Calcutta, from January, 1968 through December, 1973.

Plan of Study

Almost all publications on pelvic exenteration have stressed the indication of this operation on advanced carcinoma cervix and on recurrent or persistent carcinoma following full dose of radiotherapy. The present study has intended to review the results obtained in a group of advanced carcinoma cervix where a preplanned dose of radiation (4000-6000 rads) was administered 3 weeks to 6 months prior to the operation. The results have been compared with the other

group where no such planned radiation was used.

Selection of Cases

In general, cases of advanced carcinoma cervix are poor surgical risks. In India, the magnitude of such risk is exaggerated by low nutritional status. While cure rate will definitely improve with strict selectivity of cases, yet such an attitude will certainly prevent at least some of the cases from availing the benefit of treatment.

Distant metastases, poor nutritional status, obesity, impaired renal function, shooting pain along the legs and mental instability are some of the conditions which contraindicate surgical intervention.

Types of Exenteration

In the present study, out of 41 exenterations, 32 had anterior, 6 total (Figs. 1 & 2) and 3 posterior exenteration. The indications of the operation have been grouped in Table I.

In few selected cases of stage III carcinoma cervix we have routinely used pre-operative Telecobalt therapy. The plan was to deliver a dose of 4000 rad in 4 weeks to 6000 rad in 6 weeks to the tumour bearing area in the pelvis. The technique of radiation was by rotational method with Telecobalt. This procedure has been followed by surgical exploration as early as possible but not before 3 weeks. Admission formalities have delayed the operation in some cases but

*Reader, Obstetrics & Gynaecology, N. R. S. Medical College, Calcutta.

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TABLE I
Indications for Exenteration

Group	Indication	No. of cases	Types of Exenteration	
Group—I	Following planned preoperative radiotherapy (4000-6000 rads) for Stage III ca-cervix	21	Anterior	— 20
			Total	— 1
Group—II	Recurrence or persistence following full dose of radiotherapy	4	Anterior	— 1
			Total	— 3
Group—III	Stage IV ca-cervix (without preoperative radiotherapy)	11	Anterior	— 7
			Total	— 2
			Posterior	— 2
Group—IV	Accidental detection of extensive parametrial, bladder or rectal involvement at Wertheim's hysterectomy	5	Anterior	— 4
			Posterior	— 1

not beyond 6 months. Decision of exenteration or less radical surgery was taken following laparotomy. Out of 21 exenterations in this group, 20 had anterior and 1 total exenteration.

Operative Technique

Approach: In all cases, the entire operation was completed through abdominal approach. At the final stage of the operation, redundant portion of the vaginal cuff was removed by the perineal route. The introitus was closed by uniting the levatores ani muscles with interrupted catgut sutures and apposing the raw edges of labia minora by nylon stitches leaving behind a corrugated drain inside the pelvis. Pelvis floor muscles and the terminal part of anal canal were not resected as a rule. In this respect our operation may be considered less radical than what has been advocated by Brunshwig (1963) and Parsons (1954).

Gland Dissection

Dissection of lymph nodes was sometimes difficult but not specifically in the irradiated group. This part of the operation was done first, because this area de-

mands maximum concentration of the surgeon and such concentration can hardly be expected at the final stage of the operation. When one or two lymph nodes were found adherent to the vessel wall, they could easily be separated by sharp dissection through the space between the capsule of the gland and the sheath of the vessel wall. But when chain of lymph nodes were matted together and were found adherent to the vessel wall, node dissection was abandoned and in some cases we did not proceed with exenteration. This situation was commonly encountered in association with dense parametrial induration and encroachment of the growth towards the walls of the pelvis. Table II (a and b) shows the

TABLE II(a)

LYMPHADENECTOMY		
Performed	—	31
Not performed	—	10

TABLE II(b)

GLAND INVOLVEMENT		
Positive	—	18 (58.06%)
Negative	—	10
Report not available	—	3

number of lymphadenectomies and incidence of gland involvement in the present series.

Urinary Diversion

The problem of urinary diversion is important because continued survival of the patient will depend on the integrity of the urinary tract after apparent control of cancer has been achieved by this extensive surgery. Coffey or Stile's technique of colonic transplantation of ureters is technically easy and at the same time less time consuming. But unpredictable degrees of hydronephrosis, ascending infection and electrolyte imbalance invariably follow these simplified procedures. "Mucosa-to-mucosa" anastomosis at least prevents the risk of stenosis and hydronephrosis. Ileal and sigmoid conduit are better substitutes but in the present series, these procedures could not be done in many cases, as the time spent on exenteration was too long to allow another laborious task to be undertaken. To prevent the hazards of urinary diversion, Bannerjee (1971) has reported a modified technique of exenteration operation in some cases of carcinoma cervix stage IV (Bladder). He has performed partial cystectomy and resection of terminal parts of ureter with neocystostomy in cases where bladder neck and urethra were free from cancer. In the author's experience, this technique had to be followed in some cases where bladder was thought to be free by preoperative clinical or cystoscopic assessment, but on laparotomy, a small area of bladder or ureterovesical junction was found adherent to the cervix or to the vault of the vagina. Such technique, however, does not ensure adequate removal of parametrial or paravaginal tissues. Table III shows the types of urinary diversion performed in the present series.

TABLE III
Urinary Diversion (Anterior and Complete Exenteration)

Types of diversion	No. of cases
Colonic transplantation	35
Coffey and Stile's technique	: 18
Mucosa-to-mucosa anastomosis	: 17
Ileal Conduit	2
Sigmoid Conduit	1

Management of Large Cavity Inside the Pelvis

It is not possible to cover up the large bare area inside the pelvis with peritoneum following exenteration operation. Various devices have been advocated to deal with this raw area. The commonest device is "Pack" with roller gauge. Packs not only keep the intestines away from the raw area but also help to achieve complete haemostasis.

The author, as a resident, had the unfortunate experience of encountering herniation of loops of small intestine in one case while the pack was being removed. In two other cases, the walls of some major veins were avulsed during removal of packs, and bleeding could not be checked inspite of repacking and ultimately the patients died. Since the author has been doing exenteration independently, there has been no occasion at which a pack had to be left inside the pelvis for securing haemostasis. It is true that granulation tissue may form over the bare area if there is active infection in the exudate. The granulation tissue by its erosive action may cause perforation of the bowel wall leading to fistula formation. One of the cases in the present series had this complication.

Primary mortality was 17.07% (7 out of 41 cases). While analysing primary mortality on the basis of grouping it

TABLE IV
Primary Mortality (Death Within 30 Days, Irrespective of Cause)

Type of operation	No. of cases	Group of cases	Cause of death	
Anterior Exenteration	3	2 from Gr. — I	(i) Uraemia	5th day
		1 from Gr. — II	(ii) Distension and paralytic Ileus.	15th day
			(iii) Thrombophlebitis and General Cachexia	30th day
Total Exenteration	3	1 from Gr. — II	(i) Pulmonary Embolism	6th day
		1 from Gr. — III	(ii) Uretero parietal and intestinal fistula	28th day
			(iii) Urinary tract infection and uraemia	22nd day
Posterior Exenteration	1	1 from Gr. — III	Hypoproteinaemia and General Cachexia	22nd day

will be observed that in Group-I (Stage-III with planned pre-operative radiotherapy), mortality was no less than mortality in other groups.

Follow Up

Thirty-four cases survived the operation and left the hospital. Six were lost on follow up and they could not be traced. 10 died within 5 years. The details are given in Table V (a), V (b) and V (c).

TABLE V(a)
Follow-up (34 Cases)

	No. of cases
Surviving	18
Died within 5 years	10
Lost on follow up	6

TABLE V(b)
Period of Survival of 10 Cases Who Died Within 5 Years (In Relation to Type of Operation)

Period of survival	No. of cases	Type of operation	
Within 1 year	5	Total	— 3
		Posterior	— 1
		Anterior	— 1
1-2 years	1	Anterior	— 1
2-5 years	4	Anterior	— 4

TABLE V(c)
Cause of Subsequent Death (10 Cases)

	No. of cases
Urinary tract infection and uraemia	3
Recurrence or persistence	7

Survival

Eighteen cases are still surviving and are being followed up. The type of exenteration performed in these cases are shown in Table VI.

TABLE VI
Survival

Nature of operation	No. of cases
Anterior exenteration	17
Posterior exenteration	1
Total exenteration	Nil

A substantial 5 year survival rate has been achieved by the use of planned pre-operative radiation in stage—III cancer cervix. (Gr. I) One Case in group—IV, surviving for 5 years had posterior exenteration. (Figs. 4 & 5).

As stated by Ingersoll (1965), Inguila and Cosmi (1967), exenteration operation can be performed more satisfactorily when the growth has extended in the anterior and posterior directions of the pelvis. Lateral extension and fixation of the growth or glands on the major vessels makes dissection extremely difficult.

Preoperative radiation is not a contra-indication for exenteration. Though Rutledge and Burns (1965) state that high dose of preoperative radiation reduces patient's tolerance considerably, yet Barber (1967) holds the view that appropriate operation could be performed when radiation was received within 6 months prior to the operation. None of these reports, however, indicate the use of preoperative radiotherapy in a planned way to assess the resectability of growth and at the same time to evaluate the number of survivors by the combined procedure. In the present series, with the use of planned dose of radiotherapy prior to surgery, the primary mortality could not be reduced, but survival rate could definitely be improved. It may be that in these cases the glands were negative; either they were not involved or were extremely radiosensitive—a fact, which can, as well account for good salvage rate in this group. In Barber's series (1967), the results were excellent in those patients who received pre-operative radiotherapy and whose specimens proved negative at the time of surgical excision. More experience is necessary to make a valid comment.

With limited resources and several objections, some of which are valid, the author has been doing exenteration operations since 1968 with varying rates of success and failure. Undoubtedly, life has been prolonged in few cases. Some of them at least, are leading useful and

relatively comfortable lives. The grateful survivor makes the surgeon feel that his efforts and anxiety have been well rewarded.

Summary

1. 41 cases of pelvic exenteration have been reviewed. Of these, 32 had anterior 6 total and 3 posterior exenteration.
2. 21 cases had planned preoperative radiation of 4000 to 6000 rads 3 weeks to 6 months prior to surgery.
3. Primary mortality was 17.07% (7 out of 41 cases).
4. 6 cases were lost to follow up and 10 died within 6 months to 5 years.
5. Of 18 patients surviving, 6 are being followed up for more than 5 years.
6. 5 out of these 6 cases surviving for more than 5 years, belonged to the group who received planned pre-operative radiation and the glands were negative in these cases.

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See Figs. on Art Paper III-IV

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