"MITRA OPERATION" FOR CANCER OF THE CERVIX*

by

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Introduction

Mitra operation, i.e. Radical Vaginal Hysterectomy with Extraperitoneal Bilateral Pelvic Lymphadenectomy has already established its place by virtue of its merit in the surgical treatment of carcinoma of the cervix. It is recognised all over the world as an ideal operation for Stage I and Stage II carcinoma of the cervix.

This is a personal series of 230 cases of carcinoma of the cervix of various stages treated by the Mitra technique.

History of the Operation

Late Dr. Subodh Mitra first started Schauta's operation in 1925 and continued for a quarter of a century with good result (Mitra, 1951). He met with severe criticism when he presented his results of Schauta's operation at the Royal Society of Medicine in 1947 (Mitra, 1955). The criticism that he had to face was that in Schauta's operation pelvic lymph nodes were ignored. Then he started doing radical vaginal hysterectomy (Schauta's operation) in one sitting, followed 2 weeks after by extraperitoneal bilateral pelvic lymphadenectomy. Since 1952 he combined the two operations in one sitting (Mitra, 1957, 1959) with marked improvement in 5-year salvage from 44.5 per cent in Schauta's operation to 61 per cent in Mitra technique. The new operation starts with the extraperitoneal dissection of pelvic lymph nodes, ligation of ovarian and uterine vessels and partial mobilisation of parametria and finally ends with the radical vaginal hysterectomy with massive removal of parametria and vaginal cuff.

The new operation designed by him is named as "Mitra Operation" and a monogram was published by him as "Mitra Operation" for Cancer of the Cervix (1960).

Analysis of 230 Cases of Mitra Operation

An analysis of 230 personal cases of cancer of the cervix is enumerated in Table I to III, treated by Mitra Operation from January, 1963 to July, 1975 both in the hospital service of Medical College, Calcutta and R. G. Kar Medical College, Calcutta and in the private service. Post-operative deep X-Ray therapy was administered in those cases only where parametria and pelvic lymph nodes showed evidence of metastases.

TABLE I

The Clinical Staging — 230 Cases

Stages	No. of cases	Per cent
I	48	21.0
II	160	69.5
III	22	9.5
IV	Nil	Nil

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TABLE II

Associate Lesions

	No. of cases
Prolapse uterus	18
Pyometra	14
Fibromyoma of uterus	7
Haematometra	1
Pregnancy: (2 upto 12 weeks; another 8 weeks pregnancy in stage of incomplete abortion)	3
Endometriosis	6
Genital tuberculosis	1
Tubo-ovarian mass	15
Chocolate cyst of ovary	5
Double ureter (left side)	1
Absence of kidney and ureter (right side)	1
Floating kidney (left side)	1

Five-Year End-Result

The materials at hand are not large but may be taken to be sufficiently representative. Table IV shows the break-down figure of 128 cases surviving for 5 year or more.

Table V shows the five-year end-results on the basis of cancer positive and cancer negative pelvic lymph nodes in this series. Prognosis in gland metastases cases is definitely unfavourable-31.2 per cent five-year salvage rate being the former group in comparison to 70.8 per cent in the latter group. But 31.2 per cent 5 year salvage rate even in gland positive cases is quite encouraging and justifies the importance of compulsory bilateral pelvic lymphadenectomy.

TABLE III

Lymph-nodes Metastases

Stages	No. of cases	Cancer Positive Glands				
		No. of cases	Percentage			
			Roy Chowdhury 1975	Mitra 1960	Graham 1960	Navratil 1951
I, II & III	230	72	31.3	22.6	—	—
I	48	8	16.6	15.8	15.0	11.0
II	160	52	32.5	29.5	27.0	23.0
III	22	12	54.5	41.0	66.0	43.0

TABLE IV

Five-Year End-Result of Cancer of the Cervix Treated by 'Mitra Operation'

No. of cases followed-up	Stages	Five-year Salvage	
		No. of cases	Percentage
128	I, II, III	78	60.9
42	I	32	76.2
81	II	49	54.3
5	III	2	40.0

TABLE V

Five-year End-result in Cancer Positive Lymph Nodes Treated by 'Mitra Operation'

Pelvic Lymph Nodes	No. of cases	Five-year Salvage	Percentage
Negative	94	68	70.8
Positive	32	10	31.2

Post-operative telecobalt therapy was given as a routine in the gland positive cases.

Discussion

There are obvious scientific reasons for which this operation is ideally suited for cases of carcinoma of the cervix particularly in our patients where malnutrition, hypo-proteinaemia and anaemia are so common. I was attracted to the vaginal route instead of the abdominal route due to the following reasons:

1. The primary mortality rate is much less in the vaginal technique. In the present series it was 1.8% so far out of 230 cases operated by Mitra technique.

2. Short statured, obese patients can be better tackled by the vaginal rather than the abdominal route.

3. Poor surgical risk patients are better operated by this technique.

4. Hypertension, renal or heart disease, pregnancy upto 12 weeks, previous gynaecological operations, presence of ureteral abnormalities e.g. double ureter on one side are not contraindications to this operation. For these reasons the operability rate of the vaginal operation must be greater than that of the abdominal approach as is obvious from the Tables VI and VII.

5. There is no question of burst abdomen and incisional hernia in vaginal technique. Postoperative shock, distension, peritonitis, etc. are much more common in abdominal radical operation than in vaginal radical operation.

6. The frequency of bladder, ureteric and rectal injury with secondary fistulae, especially uretero-vaginal fistulae, are negligible in the vaginal operation as is obvious from Table VI. Due to rehabilitation of the bladder after extensive removal of vagina in Mitra Operation, post-operative bladder troubles are minimal.

7. Greater amount of parametrial, paravaginal and paracervical tissue can be removed by vaginal radical method. Almost whole of the vagina can be removed due to which local recurrence in the vagina after this operation is much less.

8. Genital prolapse with carcinoma of the cervix, cervical stump carcinoma and Stage III (vagina) cancer cervix can be electively operated by Mitra Technique. In fact my first "Mitra Operation" was a case of stump carcinoma following subtotal hysterectomy done for fibromyoma of uterus.

The objections put forward against "Mitra Operation" are:

Three cuts are made—two for extraperitoneal pelvic lymphadenectomy and one for radical vaginal hysterectomy requiring more time. But this should not be a genuine objection to such a radical operation In spite of two abdominal incisions made for extraperitoneal lymphadenectomy the incidence of post-operative abdominal complications and incisional hernia is minimal. Longer duration of operation should not be a great handicap, particularly with modern anaesthesia, in radical surgery where

TABLE VI

Operative rate, Primary Mortality and 5-Year Cure rate of different Surgeons

	Surgeon	No. of cases	Operability rate	Primary Mortality rate	5-Year survival rate
Pre-Wertheim Era	Freund (1878) (Abdominal)	—	—	70.0%	—
	Czerny (1882) (Vaginal)	—	—	26.0%	—
Wertheim & Schauta Era	Wertheim (1902) (Abdominal)	500	50.0%	18.6%	42.0%
	Schauta (1908) (Vaginal)	698	51.3%	2.3% (in 1910 only 1 death in 50 cases)	30.7%
Post-Wertheim and Schauta Era	Victor Bonney (1935) (Abdominal)	500	63.0%	14.0%	40.0%
	Stoeckel (1928) (Vaginal)	1200	76.6%	4.0%	50.0%
	Read (1948) (Abdominal)	150	14.0%	8.3%	44.4%
Recent Era	Meigs (1954) (Abdominal)	200	17.0%	3.8%	62.2%
	Mitra (1960) (Vaginal)	500	37.0%	3.6% (in last 105 cases—no death)	55.7%
	Roy Chowdhury (1975) (Vaginal)	230	—	1.8%	60.9%

TABLE VII

Fistula Rate in Different Types of Operation for Carcinoma of the Cervix

Surgeons	Uretero-vaginal Fistula (Per cent)	Vesico-vaginal Fistula (Per cent)	Recto-Vaginal Fistula (Per cent)
Stoeckel (1928) (Vaginal)	2.0	3.5	1.6
Meigs (1954) (Abdominal)	7.0	2.0	—
Mitra (1960) (Vaginal)	Nil	0.9 Injury—1.8	Nil Injury—1.38
Present author (1975) (Vaginal)	Nil Injury—nil	Nil Injury—nil	Nil Injury—nil

precision of work is more important than rapidity.

Second objection to this new technique is that in spite of two abdominal incisions for extraperitoneal lymphadenectomy, exploration of the abdominal cavity is not possible. As opposed to that, Table II shows the list of associated lesions that were tackled by Mitra Operation in the present series.

Discussion

In spite of these advantages and its satisfying results the vaginal route is still not so popular as the abdonimal one excepting in the continental countries. I hope more and more enthusiastic surgeons will come forward and take up this operation of "Mitra Technique" for the surgical treatment of cancer of the cervix.

Summary

1. Two hundred and thirty cases of cancer of the cervix at various stages treated by Mitra Operation are analysed.

2. Merits and demerits of vaginal radical versus abdominal radical surgery in the treatment of cancer of the cervix are enumerated.

3. A plea has been made to take up Mitra Operation in the surgical treatment of the cancer of the cervix all over the world.

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