

## A STUDY OF 250 CASES OF MITRA'S OPERATION IN THE TREATMENT OF CARCINOMA CERVIX (PERSONAL SERIES)

by

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Radical vaginal hysterectomy with bilateral extraperitoneal lymphadenectomy popularly known as "Mitra's Operation" has established its place in the treatment of carcinoma of cervix. This operation has fulfilled all principles of cancer surgery in the treatment of this disease. Those who have done this operation or have seen this operation, will agree with the present author that this operation is more anatomical, dissection is more clean and more amount of parametrial and vaginal tissue can be removed. This operation does not pose any problem in obese patients and incidence of ureterovaginal fistula is extremely rare. Besides, it has another advantage in cases of uterovaginal prolapse which can be repaired at the same time while doing this operation. The only disadvantage of this operation is that it requires 3 incisions and takes more time to perform. It is rather unfortunate that this operation has not been taken over by many oncological centres of India.

The present author had the privilege of presenting his personal series of Mitra's Operation in the treatment of carcinoma of cervix in the 15th and also in the 19th All India Obstetric and Gynaecological Congress (Roy, 1970 and Roy, 1977).

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The author had evaluated the scope of this operation in the management of carcinoma of body of uterus (Roy, 1976). Moreover, this operation can be undertaken in cases of carcinoma of cervical stump and carcinoma of vagina occurring in its upper third. As 250 cases of Mitra's operation have been performed upto June 1981, the author feels that time has come to evaluate its results.

### *Material and Methods*

From April 1963 to June 1981, 250 cases of Mitra's Operation had been done by the present author in Chittaranjan Cancer Hospital, Calcutta and also privately for the treatment of carcinoma of cervix. Of these 238 were operated for carcinoma of cervix, 3 for stump carcinoma, and 4 for complete procidentia along with this disease. There were 5 cases of pregnancy along with this disease—one of them had caesarean section about a month ago and the rest were carrying pregnancy of about 10 to 12 weeks' duration.

### *Observations and Discussion*

Out of 250 cases, 8 were nulliparous and rest parous. The highest parity noted in the series was 16.

Age Incidence: The age distribution of patients in this series is shown in Table I.

Nearly 70 per cent of patients in this series were between the age of 31 to 50

TABLE I  
Age Distribution

Age in Years	No. of cases
21-30	22
31-40	89
41-50	85
51-60	44
61 and above	10

years. The youngest patient was 25 and eldest 70 years.

Stage of Disease: The stage of disease in this series is shown in Table II.

TABLE II  
Stage of Disease

Stage	No. of cases
0	5
I	60
II	182
III	3

It is seen from the above Table that 72.8 per cent of the cases were in Stage II, whereas 24 per cent were in Stage I. In the previous two series there was no case of intraepithelial carcinoma. But in the present series 5 cases were found.

Histology: In this series 220 cases were of epidermoid carcinoma (88%), 17 adenocarcinoma (6.8%), 8 anaplastic carcinoma (3.2%) and 5 intraepithelial carcinoma (2%).

In cases of adenocarcinomas, endo-

metrium was found to be involved in 10 cases and in 2 of these myometrium was involved; whereas in cases of epidermoid carcinoma, endometrium was involved in 29 out of 220 cases and in 9 of these myometrium was involved. Only in 1 case of this series metastasis was found in ovary. In view of low incidence of metastasis in ovary, the question comes "should ovaries be removed in all cases of carcinoma of cervix".

Associated Conditions: Table III shows the associated conditions detected along with the disease.

TABLE III  
Associated Conditions

Associated condition	No. of cases
Hypertension	7
Diabetes	6
Prolapse of uterus	4
Pregnancy	5
Hydrosalpinx and Tubo-ovarian mass	18
Fibroid	15
Pyometra	8
Double ureter	5
Endometriosis	7
Ovarian cyst	2
Varicocele of vagina	1

#### Methods of Treatment

Different protocols of treatment given to the patients are shown in Table IV.

All 5 cases of intraepithelial carcinoma

TABLE IV  
Different Protocols of Treatment

Stage	No. of cases	Operation only	Operation + External Radiation	Radium + External Radiation + Operation
0	5	5	—	—
I	60	33	27	—
II	182	32	140	10
III	3	—	—	3

had radical vaginal hysterectomy without doing lymphadenectomy. One may criticise why such extensive operation has been done in cases of intraepithelial carcinoma. It is rather an unfortunate experience of the present author that when vaginal hysterectomy with removal of cuff of vagina was done on these cases, few of them showed invasive carcinoma on serial sections of removed specimen of cervix. That's why the author prefers to do Schauta's radical vaginal hysterectomy on these cases.

It had been discussed earlier about liberalisation of policy of giving post-operative external radiation to these patients (Roy, 1970 and Roy, 1977). In Stage I, 45 per cent of patients received external radiation (27 out of 60) whereas in Stage II, 77 per cent of patients received radiation (140 out of 182). Ten patients in Stage II had two applications of radium prior to surgery in order to reduce the volume of the growth. All 3 cases in Stage III were treated by radium followed by external radiation. Unfortunately, the growth recurred in all of them. It was possible to do Mitra's operation on these cases.

The incidence of lymph node metastases is shown in Table V according to different clinical stages.

Because of increase in the number of operations the incidence of lymph node metastases in Stage I has increased from 16 per cent of last series to 18.3 per cent, but in Stage II it has fallen further from 26.6 per cent to 23.6 per cent (Roy, 1977). It is interesting to note that in spite of full radiation in Stage III cases metastases to lymph node was still present in 1 case. Altogether 22 per cent had nodal metastases in this series.

Out of 55 cancer positive nodes, hypogastric glands were involved in 50 cases, common iliac in 13 cases, external iliac in 12 cases and obturator in 8 cases. There was involvement of Cloquet gland and sentinal gland in 1 case each. Unilateral involvement of glands was found in 34 cases (61.8%) and bilateral in 21 (38.2%).

In 1965 the present writer published his observation on the influence of parametrial involvement and nodal metastases - in cases of carcinoma of cervix (Roy, 1965). In this series, the incidence of parametrial involvement was noted in 17 cases and is shown in Table VI.

TABLE V  
*Incidence of Nodal Metastases*

Stage	No. of cases	No. of Cancer Positive Glands	No. of Cancer Negative Glands
I	60	11 (18.3%)	49 (81.7%)
II	182	43 (23.6%)	139 (76.4%)
III	3	1 (33.3%)	2 (66.7%)
Total	245	55 (22.0%)	190 (78.0%)

TABLE VI  
*Incidence of Parametrium Involvement*

Stage	No. of cases	No. of Parametrium Infiltrated cases	No. of cases Parametrium not Infiltrated
I	20	—	20 (100%)
II	96	17 (17.7%)	79 (82.3%)
III	1	—	1 (100%)

In the previous paper (Roy, 1965) it was observed that even in clinical Stage I cases parametra were involved in 18 per cent of cases and in Stage II, 25.2 per cent; whereas in the present series no involvement of parametrium was noted in any case of Stage I. In Stage II, 17 out of 96 cases (17.7%) which is also less than previous observation, were involved. In Stage III no involvement of parametrium was found which may be due to previous radiation.

Operative and postoperative complications are shown in Table VII.

developed jaundice during postoperative period which was due to blood transfusion during the time of operation.

**Postoperative Mortality:** Since last report there were no deaths. Out of 250 operations, only 2 patients died within first 24 hours. The primary mortality which was 1.3 per cent in the last report (Roy, 1977) had come down to 0.8 per cent. There was no mortality in the last 170 cases of this series.

**Five-year Survival Rate:** The results of treatment in malignant disease are evaluated by 5-year salvage rate. From

TABLE VII  
*Operative and Postoperative Complications*

Operative Complications	No. of cases	Postoperative Complications	No. of cases
Bladder injury	12	Cystitis	30
Rectal injury	2	Vesico-vaginal fistula	4
Small bowel injury	1	Rectovaginal fistula	2
Ureter injury	1	Pelvic abscess	3
False passage through urethra	1	Paralytic ileus	7
		Wound infection	12
		Jaundice	3
		Pneumonia	1

In 12 cases bladder was injured and all of them were repaired. There were 4 cases of vesico-vaginal fistula. Two of them healed up spontaneously and other 2 were repaired. Like Mitra (1960 a, b) there was not a single case of uretero-vaginal fistula in this series. Three patients

April, 1963 to June, 1976, 182 operations were done and the results are shown in Table VIII.

The five-year survival rate in Stage I was 81.1 per cent and Stage II, 56.4 per cent which is better than the previous report (Roy, 1977). The results would have

TABLE VIII  
*Five-Year Survival Rate (1-4-1963 to 30-6-1976)*

Stage	No. of cases treated	No. of 5-Year Survival	No. of cases Lost sight of
0	1	1 (100%)	—
I	53	43 (81.1%)	7
II	125	70 (56.4%)	25
III	3	2 (66.6%)	—
	182	116 (63.7%)	

been further improved if some of 32 cases who were lost sight of, could be traced. Total five-year salvage rate was 63.7 per cent.

The five-year survival rate in node positive and node negative cases is shown in Table IX.

TABLE IX  
Results of Node Positive and Node Negative Cases

Stage	Node Positive		Node Negative	
	No. of cases	No. of 5-Year Survival	No. of cases	No. of 5-Year Survival
I	8	8 (100%)	45	35 (77.7%)
II	33	9 (27.2%)	91	61 (67.0%)
III	1	1 (100%)	2	1 (50.0%)
Total	42	18 (42.8%)	138	97 (70.3%)

In this series the five-year survival rate in node positive cases was 42.8 per cent and in node negative cases 70.3 per cent. The survival rate in node negative cases has improved than the last series (Roy, 1977). Unfortunately, 32 cases could be traced.

It will be interesting to note the five-year survival rate of cases where parametrium is infiltrated or not and is shown in Table X.

#### Summary

1. An evaluation of 250 cases of Mitra's Operation done by the author in cases of carcinoma of cervix was made—of which 4 were associated with prolapse of uterus, 5 with pregnancy, 3 with stump carcinoma. This operation was done also in 1 case of carcinoma of vagina occurring in its upper third.

2. Nodal metastases in was 18.3 per

TABLE X  
Results of Parametrium Infiltrated and Parametrium not Infiltrated Cases

Stage	Parametrium Infiltrated		Parametrium not Infiltrated		No. of lost sight of
	No. of cases	No. of 5-Year Survival	No. of cases	No. of 5-Year Survival	
I	—	—	13	10 (76.9%)	2
II	6	4 (66.6%)	38	22 (57.9%)	11
III	—	—	1	1 (100%)	—

There was no case in Stage I in the group of 'Parametrium infiltrated', but in Stage II, 4 out of 6 cases (66.6%) survived. In 'Parametrium not infiltrated'

cent Stage I, 23.6 per cent in Stage II and 33.3 per cent in Stage III. Altogether 22 per cent had nodal metastases in this series.

3. No parametrial involvement was found in Stage I and in Stage II, 17.7 per cent were involved.

4. There were 4 cases of vesico-vaginal fistula and 2 cases of rectovaginal fistula. There was not a single case of uretero-vaginal fistula.

5. Five-year survival rate was 81.1 per cent in Stage I, 56.4 per cent in Stage II and 66.6 per cent in Stage III. Total five-year salvage rate was 46.4 per cent.

6. Five-year survival rate in node positive cases was 42.8 per cent and in node negative cases it was 70.3 per cent.

7. The primary mortality in this series was 0.8 per cent. There was no mortality in the last 170 cases of this series.

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