

181  
RETROSPECTIVE STUDY OF ACTIVE MANAGEMENT  
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Retrospective study of pregnancy following myomectomy  
done during 1984-87 in this hospital. Therefore the incidence of  
pregnancy following myomectomy comes to be about 37.70%. The relative ages  
and time gap between the operation were also noted. Amongst 23 cases, 21 were  
delivered by LSCS and 2 vaginally. Majority of the babies were healthy and only  
one was still-born. The pregnancy outcome following myomectomy was dis-  
cussed with review of literature.

**PREGNANCY FOLLOWING MYOMECTOMY  
(A RETROSPECTIVE STUDY OF SIXTYONE CASES)**

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**SUMMARY**

A retrospective study of the effect of myomectomy in infertile women on subsequent pregnancy outcome has been carried out. During 1986-89 total 23 cases of pregnancy following myomectomy were delivered out of 61 cases of myomectomy done during 1984-87 in this hospital. Therefore the incidence of pregnancy following myomectomy comes to be about 37.70%. The relative ages and time gap between the operation were also noted. Amongst 23 cases, 21 were delivered by LSCS and 2 vaginally. Majority of the babies were healthy and only one was still-born. The pregnancy outcome following myomectomy was discussed with review of literature.

*Introduction*

Whether fibromyoma causes infertility or infertility causes fibromyoma is not yet clear to the gynaecologists. Though many cases of successful pregnancy have been observed and reported inspite of the presence of uterine fibromyoma, there is no doubt that myomectomy improves fertility of some infertile women where the only cause of childlessness is the presence of such a tumour. The purpose of this paper is to note and highlight the effect of myomectomy in such patients on subsequent pregnancy outcome.

*Materials and Methods*

Materials of this paper have been collected from the available hospital records of Eden Hospital, Medical College, Calcutta. Retrospective analysis of the records revealed that sixty-one cases of myomectomy were performed at this hospital during the period 1984-89. Amongst these cases fiftysix cases were suffering from primary infertility and five cases had secondary infertility. During 1986-89, twenty three cases who had myomectomy during 1984-87, became pregnant and attended our A.N.C. They were followed up regularly and subsequently admitted and delivered here. The cause of infertility in these twenty three cases was attributable to only myoma as per their past gynaecological records.

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Observations

TABLE I

Total number of pregnant patients attending ANC following myomectomy ('86-'89)

Total number of Myomectomy	Total number of Pregnancy
61	23 (37.70%)

Table I showed that out of a total of sixtyone cases of myomectomy performed only 23 cases became pregnant and later attended the antenatal clinic (ANC).

TABLE II

Distribution of the post-myomectomy pregnant patients according to age groups (in yrs)

Age group	Number of cases
20-25	4(18%)
26-30	13(55%)
31-35	5(22.5%)
36-40	1(4.5%)
Total	23

Table II showed that maximum number of cases were in the age group of 26-30 years and only one case was found to be over 35 years. This is explained by the fact that maximum number of cases seek advice for infertility between 25-30 years. Decision for myomectomy were taken without hesitation before 30 years., if no factors other than myoma had been diagnosed.

TABLE III

Showing parity distribution of the cases

Parity	Number of cases
P0+0	18 (78.26%)
P1+0	5 (21.74%)
More than P1+0	Nil
Total	23

Table III showed that amongst 56 of cases primary infertility undergoing myomectomy only 18 conceived. Whereas by comparison all the five cases of secondary infertility conceived.

TABLE IV

Interval between myomectomy and subsequent pregnancy (in years)

Duration	Number of cases
Less than 2 years	7 (30.44%)
3-5 years	13 (56.52%)
More than 5 years	3
Total	23

Table IV shows that maximum number of cases conceived after three years of myomectomy (56.52%).

TABLE V

Showing mode of delivery

Normal vaginal delivery	- 2 cases (8.70%)
Caesarean section	- 21 cases (91.30%)
Total	23 cases

Table V shows that in the present series almost all the cases (21) were delivered by caesarean section and only 2 cases delivered vaginally. The justification for doing caesarean section in these cases has been discussed later on.



**TABLE VI**  
Showing birth weight of the babies

Birth weight in kg.	Number of cases
2-2.5 kg.	3 (13.04%)
2.6-3.5 kg.	18 (78.26%)
3.5 kg.	2 (8.70%)
Total	23

Table VI shows that according to the birth weight of the babies, majority were of normal and average size and weight and only 3 cases were of low birth weight. This may be due to regular antenatal care.

**TABLE VII**  
General condition of the babies

Healthy	17 cases	(73.91%)
Asphyxiated	5 cases	(21.74%)
Still born	1 case	(4.35%)
Total	23 cases	

Table VII shows that majority of such patients (17) gave birth to normal healthy babies and only one case delivered a still-born baby.

### Discussion with review of literature

Uterine myomas are a relatively common finding among the women in reproductive age group, but their importance as a causative factor for reproductive failure is difficult to define. As myoma is a common finding during different operative procedures in parous women, it cannot be concluded whether myoma itself or associated other factors are responsible for infertility. Rubin (1942) estimated the infertility rate to be as high as 42% among women with myoma and Dearnley (1956) enumerated it to be about 30%. Mechanisms by which myoma causes infertility are not well known, but different authors suggested different mechanisms which might be the answer (Jacosan & Nerberf 1956; Deligdish & Lowenthal 1970, Farrar-Brown et al 1970; Decherney & Dlugi 1984). In view of our lack of knowledge about the mechanism of infertility in myoma, myomectomy is the treatment of choice and practised since early part of this century till now in treating infertile women with this tumour within child bearing age. But the success rate is not always encouraging because many other factors may be responsible for infertility which we are unable to detect till now. Table VIII proves our observation.

It is interesting to note that myoma occurs in the child bearing period but pregnancy follow-

**TABLE VIII**

Bonney (1925)	=	38%	Ingerson & Malone (1970)	=	50%
Counsellor (1938)	=	35%	Leoffler & Noble (1970)	=	33%
Miller (1941)	=	36.5%	Baines (1971)	=	18%
Mussey (1945)	=	40%	Mishra (1973)	=	50%
Ahltrop (1946)	=	31%	Babakina et al (1978)	=	48%
Franke (1949)	=	50%	Buttram & Reiter (1981)	=	40%
Finn (1950)	=	23%	Berkeley et al (1983)	=	42%
Brown, chamberlain & Te'Linde (1956)	=	42.5%	Present Study	=	37.70%

Table VIII shows a comparative review of incidence of pregnancy following myomectomy.



ing myomectomy is not encouraging in all age groups. Ingersoll (1963) found in his series that 77% became pregnant when myomectomy was done below 30 yrs. and 17% in 35 and above age group. That the chance of pregnancy following myomectomy in women above 35 yrs. is poor has been observed by different authors also (Mishra 1973); Malone & Ingersoll 1975; Babakina et al 1978; Berkeley & Decherney 1983). In our series only one case became pregnant when the age of the mother was 35 yrs. at the time of myomectomy.

Buttram (1981) opined that when the size of the tumour is bigger than 10 weeks size, there is less chance of pregnancy. In our series in 8 (34.78%) patients, who became pregnant, the size of the tumours were more than 12 weeks size and in all such cases myomas were solitary and intramural without encroaching upon the tubal end or uterine cavity. There is a general concensus that distortion of the tubal end or endometrial cavity is more important than the size of the tumour. Mishra (1973) opined in his prospective study that when the endometrium was normal and ovaries found healthy during operation the chance of post myomectomy conception is better. He further opined that in some cases with abnormal endometrial finding - regression occurred to normal following myomectomy. As our study is a retrospective one, we failed to verify the above opinion.

It is a common observation by various authors (Malone & Ingersoll 1975; Babakina et al 1978; Mishra 1973) that pregnancy occurs in most of the cases within one year following myomectomy. In our series the majority of the pregnancies (56.52%) occurred after 3 years of myomectomy and only 7 cases (30.44%) within 2 years of operation.

A liberal use of caesarean section is usually employed to avoid hazards of vaginal deliveries in these cases. Te'Linde is also of the same view and in our series 21 cases (91.30%) were delivered by C.S. In Mishra's series (1973), 25 cases (65.78%) out of 38 cases were delivered by

C.S. Another point in choosing C.S., as an alternative to vaginal delivery is the risk of post myomectomy scar rupture. But this is extremely rare and this is only a remote possibility if the endometrial cavity has been opened during myomectomy. Pitkin & Zaltnik in year book 1984 commented that the choice of delivery is such cases should be individualised.

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We are grateful to the Prof. & Head of the Department of Obstetrics & Gynaecology, Eden Hospital; Principal and Superintendent, Medical College & Hospitals, Calcutta for their kind permission to use the hospital records during preparing this paper. We are also thankful to those House Surgeons, who actively helped in collection of the records.

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only one case became pregnant when the age of the mother was 32 yrs. at the time of operation.

Barham (1981) opined that when the size of the uterus is bigger than 10 weeks size, there is less chance of pregnancy. In our series in 8 (24.78%) patients, who became pregnant, the size of the uterus were more than 15 weeks size and in all such cases myomas were solitary and unilocular without encroaching upon the infundibulum or uterine cavity. There is a general consensus that dilatation of the infundibulum is considered to be more important than the size of the uterus. Mishra (1973) opined in his prospective study that when the endometrium was normal and ovaries found healthy during operation the chance of post-myomectomy conception is better. He further opined that in some cases with normal endometrial lining - regression occurred to normal following myomectomy. As our study is a retrospective one, we failed to verify the above opinion.

It is a common observation by various authors (Malone & Ingersoll 1970; Barham et al 1978; Mishra 1973) that pregnancy occurs in most of the cases when the majority of the myomectomy. In our series the majority of the pregnancies (26.73%) occurred when 7 years of myomectomy and only 7 cases (21.69%) within 2 years of operation.

A liberal use of progesterone for 6 months is usually employed to ward against uterine infection in these cases. Te'Lindé is also of the same view and in our series 21 cases (64.70%) were delivered by C.S. In Mishra's series (1973) 25 cases (67.78%) out of 38 cases were delivered by