

RUPTURE UTERUS

(A Clinical Study of 70 Cases)

by

V. R. AMBIYE,* M. D., D.G.O.

and

P. R. VAIDYA,** M.D., D.G.O., D.F.P., F.C.P.S.

Rupture uterus is one of the most hazardous complications and carries high maternal and perinatal mortality. Its incidence is still fairly high in our country as compared to western countries.

Even today patients are transferred from the peripheral hospitals and nursing homes after hours of prolonged labour, after all the efforts to deliver the mother have failed. Such cases are real problem cases as they carry very high mortality and morbidity.

Observations

Incidence

During the period of study there were 51,103 deliveries giving the incidence as 1:730 deliveries. Majority of the patients were between the age of 20-30 years. Average parity was 3.05.

Etiology and Type of Rupture

As shown in Tables I and II, 71.4% of

TABLE I
Types of Ruptures Uterus in Different Series

Authors	Spontaneous	Traumatic	Scar Rupture
Menon (1962)	57.8%	18.8%	23.1%
Jacob and Bhargava (1971)	92.3%	9.2%	0.5%
Indiradevi and Reddy (1975)	78.8%	8.7%	12.5%
Present series (1970-79)	71.4%	17.1%	11.4%

The present study comprises of 70 cases of rupture uterus during 10 years period from January 1970 to December 1979, evaluated with special reference to incidence, etiological factors, clinical features, type of surgery, maternal mortality and its relation to type of surgery.

Dept. of Obstet. Gynec. L.T.M.M. College and L.T.M.G. Hospital, Sion, Bombay 400 022.

*Lecturer.

**Prof./Head of the Dept.

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TABLE II
Etiology of Rupture Uterus

Etiology	No. of cases (%)
Disproportion	29 (41.4%)
Malpresentations	12 (17.1%)
Traumatic rupture	12 (17.1%)
Scar rupture	8 (11.4%)
Grand multiparity	7 (10%)
Previous fothergill's	1 (1.4%)
Cervical Encerclage	1 (1.4%)
Total	70 (100%)

our cases had spontaneous rupture and only 11.4% had scar rupture. Disproportion was the major etiological factor in 41.4% of the cases. Malpresentations like transverse lie, mentoposterior, and persistent occiputo—posterior were responsible in 17.1% of the cases. 17.1% of the cases had traumatic rupture either following internal podalic version, M.R.P., injudicious use of pitocin or forceps extraction. Out of 8 cases of scar rupture, 1 had previous hysterotomy scar which ruptured antepartum, 7 had lower segment scar which gave way when trial for vaginal delivery was in progress. One of these cases had inverted T shaped incision during previous caesarean. Two unusual cases seen were rupture following previous Fothergill's repair and Shirodkar's encirclage in 1 case each. Cervical dystocia due to excessive scarring following cervical amputation and failure to remove the encirclage strip at term probably accounted for rupture in these cases.

Diagnosis

As shown in Table III most of the cases

TABLE III
Clinical Features

Clinical Features	No. of cases
Prolonged labour	32
Loss of uterine contour	12
Superficial foetal parts	21
Vaginal bleeding	34
Haematuria	12
Paralytic ileus	7
Absence of F.H.S.	60
Shock	46
Inability to trace cervical rim	4

had typical diagnostic features. In 4 cases where rupture occurred following traumatic forceps delivery, it was detected by

tracing the cervical rim and palpation of lower uterine segment.

Pathological Anatomy

In our study, 64 cases (91.4%) had complete rupture and only 6 (8.6%) had incomplete rupture. Transverse tear of the anterior wall often with lateral extension and sometimes with tear of the bladder was the commonest variety of rupture. Out of 64 cases of complete rupture, 60 were in lower segment and only 4 had upper segment rupture. In 6 cases where rupture was incomplete, lateral wall tear with cervical extension was present in 5 cases. The sixth case had dehiscence of the previous hysterotomy scar upto the serosa.

Management

Suturing of the rent alone was done in 22 cases. In 14 of them sterilisation was done. Hysterectomy was done in those cases where suturing of the tear was impossible, tear being extensively ragged and extending into broad ligament on one or both sides, associated with haematoma. Subtotal hysterectomy was done in 31 cases.

Majority of the cases were operated under general anaesthesia. Only in 2 cases the operation was done under heavy sedation and local infiltration block.

Maternal Mortality and Morbidity and Perinatal Mortality

There were 17 maternal deaths out of 70 cases (24.2%). The causes of death were haemorrhage and shock in 10, peritonitis and endotoxic shock in 3, pulmonary embolism in 3 and Mendelson's syndrome in 1 case.

Maternal morbidity was also high. More than 50% of the patients had suffered from ill effects of either haemorrhage or sepsis. Four patients developed vesico-

vaginal fistula. Maternal mortality was highest in cases with rent repair alone and in cases with total hysterectomy. (Table IV).

TABLE IV
Mortality and Type of Surgery

Type of surgery	No.	Mortality (%)
Total hysterectomy	17	3 (17.6%)
Subtotal hysterectomy	31	6 (19.35%)
Rent repair	22	8 (36.3%)
Total	70	17 (24.2%)

Perinatal mortality was 95.7%.

Discussion and Conclusions

The incidence in our study was 1:730, is comparable to other Indian authors. Menon (1962) reported the incidence as 1:415, Shastrakar (1962) as 1:256 and Jacob *et al* (1971) as 1:305. The average parity was 3.05 and was much lower than that reported by others. Most of the authors from developing countries report average parity between 4.6 to 6.4. (Menon, 1962; Jacob *et al*, 1971). It seems that causes other than multiparity have more bearing on rupture uterus.

Spontaneous ruptures occurred in 71.4% and disproportion accounted for 40.7% of the cases. Similar observations have been made by Menon (1962), Jacob *et al* (1971) and Shastrakar (1962), such ruptures are more catastrophic than scar ruptures.

The clinical picture varied from no symptoms at all to complete collapse. Classical picture was present in about

80% of the cases. Transverse tear of the anterior wall with lateral extension was the commonest variety in all cases of spontaneous rupture. Similar observations have been made by Patel and Parikh (1960), and Prabhavati and Mukherjee (1963). Mortality rate was 24.2%, highest following rent repair and lowest (17.6%) following total hysterectomy. All the 3 cases of peritonitis and endotoxic shock were seen following rent repair. Hence hysterectomy should be treatment of choice as has also been observed by others. (Prabhavati *et al*, 1963, Hellmann and Pritchard, 1973). Rent repair may be performed only in cases of scar rupture or if the condition of the patient is too poor to withstand hysterectomy or to preserve child-bearing function. Total hysterectomy was performed in 17 and subtotal in 31 cases. Although it is advisable to do total hysterectomy than subtotal, we had to do subtotal hysterectomy in majority because most of our cases were already in a state of shock where operating time, blood loss and exposure to anaesthesia were vital factors.

Summary

1. Seventy cases of rupture uterus during 10 years' period from January 1970 to December 1979 at L.T.M.G. Hospital are analysed.
2. Incidence was 1:730, 71.4% were spontaneous, 17.1% were traumatic and 11.4% scar ruptures. It was complete in 91.4%.
3. Disproportion was responsible in 41.4% and malpresentations in 17.1%. Literature particularly in developing country like ours is reviewed.
4. Total hysterectomy was done in 24.2%, subtotal in 44.2% and rent repair

in 31.4% of cases. Overall maternal mortality was 24.2%, highest (36.3%) following rent repair and lowest (17.6%) following total hysterectomy.

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