RUPTURE UTERUS — EXPERIENCE AT A RURAL MEDICAL COLLEGE

N.P. KULKARNI • B.V. KENDRE

SUMMARY

Cases of rupture uterus admitted to S.R.T.R. Medical College Ambejogai during 3 years period from January 1986 to December 1988 were studied.

The incidence of rupture uterus during this period was 0.2% (1 : 432 deliveries).

Majority of the cases were para I and II, between 20-25 years.

Spontaneous rupture due to obstructed labour occurred in 35.7% cases whereas, previous L.S.C.S. scar rupture was noted in 56% of cases. Two patients of previous L.S.C.S. were admitted as obstructed labour and rupture uterus. Two patients had rupture uterus in pregnancy, out of these two, one was a case of uterine anomaly with previous history of curettage and in the other patient extraovular ethacridine lactate and high concentration pitocin drip was used for M.T.P.

Introduction

Rupture uterus is a very serious complication occurring in pregnancy and labour. Its incidence is said to be very much reduced with improved ante and intrapartum care. In this retrospective study we have attempted to find out the incidence, causative factors and probable prevention of these cases in a rural based hospital set up.

Dept. of Obstetrics & Gynecology, S.R.T.R. Medical College, Ambejogai.

Material and Method

Records of cases of rupture uterus over a 3 years period (January 1986 to December 1988) admitted to S.R.T.R. Medical College and Hospital, Ambejogai were studied as regards predisposing factors, operative treatment, maternal and foetal outcome etc.

Observations

There were 16 cases of rupture uterus during this period among a total of 6,923

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deliveries, an incidence of 0.2% of deliveries (1 in 432 deliveries). Only 3 patients were booked antenatally whereas 13 cases were unbooked emergency admission in labour. Table I shows the distribution of cases according to age and parity.

Obstructed labour due to CPD, malpresentation and foetal anomaly was the cause in 5 cases (31.25%). Even in the previous L.S.C.S. group there were 2 cases of obstructed labour admitted as emergency, total incidence of obstructed labour as a cause of rupture being 31.25%.

TABLE I

Age in years	*No. of cases*	*Parity*	*No. of cases*
20 - 25	9 (56.25%)	1 & 2	11 (68.75%)
26 - 30	6 (42.7%)	3 & 4	4 (25.00%)
Above 30	1 (07.1%)	5 & above	1 (06.25%)

Majority of the cases were para I and II (11) between 20-25 years age group. Four patients were para III and IV between 26-30 years age group, and only 1 was a grandmulti (para VII), above 30 years of age.

Table No. II shows the distribution of cases according to the cause of rupture.

One patient of breech delivery with obstruction to labour was referred from a PHC, where after coming hydrocephalus was not diagnosed and vigorous attempts to deliver had been made. On addmission, C.S.F. was drained through open spina bifida and baby delivered. Laparotomy

TABLE II

	Group	*No. of cases*	*Type of rent*	*Percentage*
1)	Spontaneous	5		31.25
	a) Malpresentation	2	Transverse	
	b) Contracted pelvis	2	Transverse	
	c) Hydrocephalus	1	Verticol LS	
2)	Scar			
	A) Previous L.S.C.S	9		56.12
	— Scar Dehiscene	3	Incomplete	
	— Malpresentation	3	Transverse - 2 Fundal -1	
	— C.P.D.	3	Transverse	
	B) History of previous curettage (case of bicornuate uterus)	1	Fundal	6.2
3)	Traumatic			
	Extraovular ethacridine lactate + high concentration pitocin drip	1	Posterior wall isthmic	6.2

revealed a ragged vertical rent in the L.U.S and complete disruption of bladder fundus.

Out of 9 cases of previous L.S.C.S. except for 3 booked cases all others came as emergency admissions. One patient who had previously undergone L.S.C.S. for hand prolapse was admitted with hand prolapse in this pregnancy, showing lack of awareness about supervised hospital delivery. One patient of previous L.S.C.S. developed foetal distress which may be earlier evidence of the scar giving way. In the previous L.S.C.S. group 7 cases had incomplete scar dehiscence, one patient had complete rupture of scar and in the remaining case, who was a grand multipara, site of rupture was in the fundal region, scar remaining intact. No history of previous trauma in the form of curettage or MRP was present in this patient.

There was one case of uterine anamoly with previous history of premature deliveries. She had history of curettage in previous puerperium. She presented as rupture uterus in fundal region at 7 months pregnancy and the pregnant horn had to be removed.

TABLE III

Signs and symptoms	*No. of cases*	*Percentage*
Typical presentation Pain, bleeding, shock, pallor, uterine tenderness, superficial foetal parts.	9	56.12
Foetal distress	1	6.2
Bleeding P.V.	1	6.2
Tachycardia	5	31.25

Rupture was in the posterior isthmic region in the case who had second trimester MTP with ethacridine lactate with high concentration pitocin drip.

There were only 3 cases of rupture in pregnancy, rest had ruptured during labour.

Only 9 (56.12%) patients presented with fulfledged overt signs of rupture like shock, uterine tenderness, superficial foetal parts etc. (Table III)

Hysterectomy had to be done in 7 cases. Out of these two had total hysterectomy and 5 had sub-total hysterectomy. This group includes one case of hemihysterectomy in a patient of bicornature uterus.

In previous L.S.C.S. group, the grand multi with fundal rupture of uterus had total hysterectomy. In one patient who had complete rupture of the scar, repair of the rent with tubectomy was done. Remaining cases had incomplete scar dehiscene. In these women, lower segment was opened by extending the partial defect and babies delivered. Closure and repair was done as with L.S.C.S.

There was one maternal death in this series (6.2%). This patient was admitted in a moribund condition. Total perinatal mortality rate in this series was 60.20%. If congenital anomaly and extreme prematurity is excluded perinatal mortality rate was 43.7% (Table IV).

Discussion

Rupture uterus is a grievous injury occurring during the pregnancy and labour. Incidence of rupture following obstructed labour is now greatly reduced because of

TABLE IV

Maternal and foetal outcome	*No. of cases*	*Percentage*
Maternal death	1	6.2
Maternal morbidity		
— VVF	1	6.2
— Wound infection	2	12.4
Foetal outcome		
— Fresh still birth	5	31.25
— Congenital anomaly SB	1	6.2
— Premature SB	3	18.75
— Neonatal death	1	6.2
— Live birth	6	37.5

improved antenatal and intranatal care, almost nil in developed countries. However, in rural India where minimal health care facilities are available and awareness of general population about antenatal care is very less, this problem continues to be significant.

Within 3 years period presented in this study out of 16 cases of rupture uterus, 44% were due to obstructed labour, two of them having previous L.S.C.S. Menon (1962) reported 95 cases due to obstructed labour in a series of 164 cases. Sinha and Roy (1986) reported 50.42% spontaneous and 24.49% scar rupture in their series.

Incidence of scar rupture is comparatively increasing because of liberal use of caesarean section in past few decades. Incidence of scar rupture in this series is 56.12%. Out of 9 cases of scar rupture in this group only 3 had attended antenatal clinic whereas others were admitted as emergency in labour only, two of them following obstructed labour. Five patients had only scar dehiscence. One patient with previous two L.S.C.S. came with hand prolapse for six hours, her previous section also being for hand prolapse. This shows total lack of awareness in this group of women about the availability or necessity of antenatal supervision and hospital admission well in time before the onset of labour. One should be very careful in taking a decision for CS in these women especially where it is in foetal interest only. Constant emphasis should be given about careful followup in subsequent pregnancy and labour.

Typical signs of rupture were present only in 56% cases. Careful observation for subtle signs of blood loss like tachycardia and pallor in women with high risk for rupture uterus is important. Earlier the diagnosis is made, less would be the mortality and morbidity. Foetal distress may be an early sign of rupture uterus as evidence in one of our cases.

It is interesting to compare our figures with those reported by Canadian authors Fedorkow et al (1987). They have reported 15 reptured uteri in a 20 years period from 1966 to 1985 an incidence of 0.5 per 1,000 deliveries so much in contrast with the figure of 16 ruptures in a 3 years period - incidence of 0.2% in our series.

Majority in their series are caesarean scar ruptures, previous uterine injury and uterine anomalies. No case because of obstructed labour has been reported which form the bulk of cases in our experience (44%). No maternal or foetal death is reported in their series - so much can be achieved with good antenatal and intranatal supervision, availability of sophisticated equipment and trained personnel which is still a far cry in our country, especially in rural areas. There was one maternal death in this series (6.2%) and P.M.R. was 60.20%.

One case of rupture uterus in our series was due to unrecognized aftercoming hydrocephalus in whom attempts at delivery were made at PHC. This case reemphasizes the need for proper training of PHC staff in identification of high risk cases, referral of malpresentations and other doubtful cases to well-equipped hospital.

A patient of second trimester MTP with extraovular ethacridine lactate and concomittant high concentration pitocin drip had ruptured posterior uterine wall in isthmic region. This type of injury is known to occur with prostaglandins and interamniotic saline, but not yet reported with ethacridine lactate. Injury may be related to pitocin administration.

Thus majority of the cases are preventable with proper ante and intranatal care, identification of high risk cases for delivery at institution and most important is to educate the people about supervised pregnancy and delivery. A lot is yet to be achieved.

Acknowledgement

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