

CAESAREAN SCAR RUPTURE

by

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Introduction

It is an obstetrician's unending dilemma about the management of subsequent labour, once the patient has a scar on her uterus. Some suggest repeat cesarean section for every such patient, others a trial of labour for all such patients and most take a middle of the road course i.e. individualization of each patient. There is no reliable method of knowing the integrity of the cesarean scar.

Material and Methods

This is a retrospective analysis of 28 cesarean scar ruptures diagnosed at Shree Sayaji General Hospital, Baroda Medical College (Baroda) from 1st January 1967 to 1st August 1981. Clinical profile of these patients is analysed in respect to parity and number of vaginal deliveries following cesarean section. In the end, detailed analysis is made to decide the preventability of the rupture, place of rupture and role played by the primary health centre doctor and teaching institution staff in these cases.

Analysis

There were total 730 patients with previous cesarean scar. Lower segment scar was in 721 patients and classical cesarean scar was in 9 patients. Overall incidence of the scar rupture is 3.85% and that of classical cesarean scar rupture 66%. Out of 28 cases, 25 patients (89.28%) were attending antenatal clinic in our institution. Parity varied from 2 to 6. The scar gave way in 39.28% of cases in the very next pregnancy following cesarean section (Table II). Out of 28 cases in 6 cases previous indication was contracted pelvis, a recurrent indication (Table IV). Presentation was cephalic in 42.65% and transverse in 7.14%. In 39.28% cases baby was lying free in the peritoneal cavity. Antepartum rupture occurred in 8 cases (28.57%) and intrapartum rupture in 71.42% of cases. Antepartum rupture was more common in previous classical cesarean section cases. In 64.28% cases general condition of the patient was good. Only 10 cases (35.71%) came in a state of shock. Shock was a frequent feature of classical cesarean scar rupture. In 20 cases scar had completely given way. Incomplete rupture with intact visceral peritoneum was present in 7 cases. In one interesting case, previous lower segment scar was intact and rupture was on the posterior wall of the uterus. In that case,

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baby was delivered through lower segment incision and on exploring, placenta was found behind the uterus which had come out through the rent on the posterior wall of the uterus. Bladder was involved only in 1 case and right sided broad ligament hematoma was present in 1 case.

Only suturing without tubal ligation was performed in 17.85% cases. In 13 cases (46.42%) suturing with tubal ligation was performed and in 9 cases (32.14%) hysterectomy was performed. One patient died undelivered. Out of 28 cases, 6 (21.42%) scar ruptures took place in the teaching institution, while patients were under observation and 22 (78.58%) ruptures took place prior to admission, either at patient's own place or at the primary health centre. Incidence of prematurity was 57.12%. Perinatal mortality rate was 85.71%. There were 4 maternal deaths. Out of 28 cases of rupture patient factor was present in 12 cases and primary health centre doctor was responsible in 3 cases.

Discussion

The incidence of scar rupture varies from 50% to 37.7% (Table I). In our

TABLE I
Incidence of Scar Rupture

Choudhari (1961)	17.9 %
Shastrakar (1962)	20.9 %
Morrison and Douglas (1921-1943)	37.7 %
Sarah I. Jacob (1971)	0.5 %
Present Series	3.84%

series 89.28% cases were emergency admissions. These patients never had even single antenatal examination. The chance of cesarean scar giving way is more in the immediate delivery. In our series, about 39.28% (Table II), the very next pregnancy ended in rupture uterus. The

TABLE II
Number of Vaginal Deliveries Following Previous Cesarean Section

Nil	11	39.28%
One	5	17.85%
Two	4	14.29%
Three & More	8	28.57%
Total	28	99.99%

successful accomplishment of one or more vaginal deliveries neither lessens the need for precaution nor does the risk decrease. In 28.57% (Table II) patients had 3 or more than 3 vaginal deliveries following cesarean section. Out of 9 cases of classical cesarean section, 6 ended in rupture uterus. All 6 cases were never supervised during antenatal period. Out of 6 patients, 5 were admitted in a state of shock (Table III). In 4 cases, of classical scar rupture was unpreventable as scar ruptured before 36 weeks of gestation. In 23 cases, rupture was preventable. Trial of labour was given in primary health centres where facilities for performing immediate cesarean section and blood transfusion were not available. In 6 cases, rupture took place in the teaching institution under observation. Out of 6 cases, 5 ruptured before 30 weeks of gestation. In 1 case, missed abortion of 20 weeks gestation was mistaken for fibroid because of the wrong menstrual history given by the patient. Patient died on 6th day after admission due to intractable haemorrhage. Even quick subtotal hysterectomy and ten bottles of blood transfusion could not save the patient. There was a partial rupture of the previous lower segment cesarean scar. In 2 cases, trial of labour was given when head was floating at the time of labour and mild disproportion was suspected. This could have been avoided by performing immediate cesarean section. Contrary to the belief, lower segment scar

TABLE III

Patient Profile in Classical Cesarean Scar Rupture

Sr. No.	Age in yrs.	Parity	Indication	Condition on admission	Type of Rupture	Treatment	Postoperative period	Foetal outcome	Time of Rupture
1.	25	Gr. III	2nd Classical section for breech	Emergency admission in a state of shock	Complete scar rupture	Subtotal hysterectomy	Uneventful recovery	1900 gm. S.B.	Antepartum rupture
2.	28	Gr. II	1st Classical C.S. Indicaion not known	Patient was given trial labor at PHC Admitted in a state of shock	Complete scar rupture	Suturing with T.L.	Uneventful recovery	2250 gm. S.B.	Intrapartum rupture
3.	29	Gr. V 3 FTND	4th Classical C.S. for placenta previa	Emergency admission in state of shock	Complete scar rupture	Suturing with T.L.	Thrombophlebitis and superficial wound gaping	1750 gm. S.B.	Antepartum rupture
4.	30	Gr. II	1st classical C.S. for transverse lie	Emergency admission in a state of shock	Complete rupture	Suturing with T.L.	Uneventful recovery	2250 gm. S.B.	Antepartum rupture
5.	40	Gr. II	Classical C.S. for transverse lie	Emergency admission in a state of shock	Complete rupture	Suturing with T.L.	Uneventful recovery	2200 gm. S.B.	Antepartum rupture
6.	30	Gr. II	1st classical C.S. indication not known	Emergency admission. General condition good	Complete rupture	Suturing	Uneventful recovery	1220 gm. S.B.	Antepartum rupture

ruptured when original cesarean section was performed for nonrecurrent indication. In non-recurrency indications, cesarean section is performed before the onset of labour when lower segment is not well developed and incision will violate the contractile portion of the uterus. Hence cesarean section performed before the onset of labour may be placed in the category of classical cesarean section. In our series, scar rupture occurred in 53.57% (Table IV) cases where indica-

an hour after admission. This patient was given trial of labour at the referral hospital. In this case never attended antenatal clinic and succumbed to peritonitis following laparotomy. One patient died due to intractable hemorrhage.

In developing countries, where the patient's educational standard is low, hospital facilities are scarce and, inadequate, transport facilities are poor, one should think many times before cutting

TABLE IV
Indication of Previous C. S.

I. Recurrent			
Contracted pelvis		6	21.43 %
II. Non-recurrent		15	53.57 %
Eclampsia	2		
Abnormal presentation	7		
Obstructed labour	4		
Placenta praevia	1		
Toxaemia	1		
Not known		7	25.00 %
Total		28	100.00%

tion for previous section was non-recurrent. Incidence of prematurity was 57% (Table V). There were 4 maternal

uterus without adequate obstetric indication. Alternate methods of vaginal deliveries may be considered. In subsequent pregnancy, she may not only lose her baby and uterus, but also risk her life.

TABLE V
Perinatal Outcome

Less than 1500 gm.	4	14.28%
1501 to 2000 gm.	8	28.56%
2001 to 2500 gm.	4	14.28%
2501 to 3000 gm.	10	35.71%
More than 3000 gm.	2	7.14%
Live Births	5	17.85%
Still Births	23	82.14%
Neonatal death	1	3.57%
Perinatal mortality	24	85.7 %

deaths. All 4 deaths were preventable. One patient died undelivered within half

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