

STUDY OF INTEGRITY OF CAESAREAN SCAR

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The importance of study of integrity of the caesarean scar is mainly to minimise the maternal and foetal mortality and morbidity and the assessment whether further pregnancy should be allowed and whether caesarean section will be the correct procedure for this pregnancy. For these, consecutive 80 cases post caesarean pregnancy managed in Chittaranjan Seva Sadan, Calcutta, during the period July 1972 to June 1974, are studied.

During the above period, 13,650 confinements were conducted of which there were 752 caesarean sections, giving rise to a percentage of 5.5.

Out of 80 cases, 50 (62.5%) (Group A) were of second pregnancy and 30 cases (Group B) were of 2 or more than 2 previous pregnancies. The following is the outcome of these cases regarding the nature of delivery:

While conducting the cases, the parity was studied. In Group 'A' 42 cases had

caesarean section and 8 cases had vaginal delivery and in Group 'B' 22 had previous 2 caesareans, 1 had 3 previous caesareans and remaining 7 cases who had previous vaginal delivery after caesarean, 2 had vaginal delivery and 5 caesarean section (Table II).

While scrutinising the above cases, it was observed that 14 cases in Group 'A' and 8 cases in Group 'B' had recurrent cause like contracted pelvis.

Out of the 80 post caesarean section cases, 70 caesarean sections were performed and about 50% of the whole group was admitted in labour. Assessment regarding nature of delivery was ascertained immediately after admission. Nine cases (11.4%) had variable amount of scar rupture detected during caesarean section. Out of 9 patients with scar rupture, incomplete rupture was found in 8 cases and complete in 1 case. Spontaneous rupture was present in 2 cases when the placental insertion was

TABLE I
Incidence of Vaginal Delivery and Caesarean Section

	Total cases	Vaginal delivery	Caesarean section	Caesarean Section	
				Elective	After trial
Number	80	10	70	14	56
Percentage		12.5%	87.5%	9.2%	80.8

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found on the anterior wall of the uterus. It was also observed that the patients were admitted with dehisant scar on 7 occasions (Table III).

TABLE II
Incidence of Caesarean Section and vaginal delivery in Group 'A'

Vaginal delivery	Caesarean Section	Total
8	42	50
16%	84%	100%

Incidence of Caesarean Section and vaginal delivery in Group 'B'.

Previous Caesarean Pregnancy:	Had one or more vaginal delivery after the caesarean:	
Caesarean	Vaginal Delivery	Caesarean
23	2	5
76.6%	6.6%	16.6%

TABLE III
Scar Rupture

	Incomplete		Complete		Outside Hospital	In Hospital	Total:
	Spont	During Labour:	Spont:	During Labour			
Number	2	6	0	1	7	2	9
Percentage	22.2%	66.6%	0%	11.7%	77%	23%	

Incidence of scar rupture in relation to the number of pregnancy was found as follows (Table IV). fourth pregnancy while caesarean was performed in her third pregnancy for the same reason. Postpartum haemorrhage

TABLE IV

	2nd Preg	3rd Preg.	4th Preg.	5th Preg.	Total:
No. of cases	50	19	9	2	80
No. of scar ruptured	4	4	1	0	9 (11.1%)

In these cases with scar rupture, it was also noted that most of them (6) had prolonged pyrexia or wound infection after operation which might have impaired proper healing of the uterine wound. Incidence of scar rupture varied on the number of pregnancy and previous vaginal delivery following caesarean, did not give the security against scar rupture.

There was one maternal death (1.2%) where emergency caesarean section was done due to placenta previa in her

with shock was the contributing factor of the maternal loss.

Five babies (6.2%) were lost in the whole series of 80 cases. Foetal mortality summerized as follows: (Table V)

Discussion

Integrity of caesarean scar depends upon various factors which help the proper healing. (a) Poor general condition like anaemia, malnutrition, (b) poor socio-economic status, (c) tissue anoxia

TABLE V
Foetal Outcome

Elective Section:	Caesarean 14 Cases		Caesarean after trial: 55 Cases:			Vaginal Delivery 10 Cases:		
	Dead		Living	Dead		Living	Dead	
	Neonatal:	Still born:		Neonatal:	Still born:		Neonatal:	Still born:
14	0	0	53	1	2	8	1	1
100%	0	0	94.6%	1.9%	3.6%	80%	10%	10%

leading to infection, (d) sepsis, (e) improper haemostasis-breaking down the bridge of continuity, (f) lack of vitamin C, are factors which impair tissue healing.

Though practically no clinical examination can confirm the integrity of the scar regarding scar rupture, by following methods scar integrity may be ascertained. They are as follows:

I. Scar tenderness by palpation of abdomen at the site of the uterine scar pregnancy and/or labour.

II. Maternal general condition like increase of pulse rate and variation of blood pressure (during labour).

III. Fresh vaginal bleeding, abnormal uterine contour.

IV. Dull aching pain during pregnancy and/or labour and sudden release of pain or cessation of contractions (? rupture).

V. Digital exploration of uterus after delivery or abortion.

VI. Frequent bladder symptoms during labour.

VII. Laparotomy.

VIII. Scar biopsy.

IX. Hysteroqram in non-pregnant uterus.

Since the series is small, the result is not compared to any corresponding series of post caesarean confinement. However, Wilson (1951) gave incidence

of scar rupture as 1.6 with 1% complete rupture. Parikh's (1964) incidence of rupture was 1.29 per cent in lower segment operation, Classical section carries risk of rupture of 42%. Lawrence (1953) represented a 0.47% scar rupture. Menon (1962) gave out the incidence of rupture 2.7% in lower segment and 11.5% in upper segment caesarean section.

Ghosh (1967) reported an overall incidence of rupture scar as 1.77% from the same institution. In this series there was an overall incidence of 11.4% scar rupture of which 2.3% occurred in the hospital.

Perinatal loss in this series was 6.2%, whereas Ghosh reported an incidence of 7.16% gross perinatal loss from same institution.

Success rate of vaginal delivery in this series was 12.8% with previous lower segment scar. But it was 45.22% with Menon (1962); 48.76% with Parikh (1964) and 22.9% with Lawrence (1953).

Maternal mortality of 1.2% in this series was due to shock and haemorrhage.

Comments

Review of the scar material, both gross and microscopic, was fibrous union in some, apparent myometrial regeneration in some and combination of both types

in others (Lawrence). Cases with a recurrent cause should have elective section.

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