Influence of fetal weight on mode of delivery in patients undergoing trial of scar

by Mr. Chew Weng Yew
M.B.B.S., F.R.C.S.(Eng.), F.R.C.S.(Edin.), M.R.C.O.G.
Honorary Consultant Obstetrician and Gynaecologist,
Chinese Maternity Hospital,
Kuala Lumpur.

and Dr. Milton Lum Siew Wah
M.B.B.S.
Senior House Officer,
Simpson Memorial Maternity Pavilion,
Edinburgh, Scotland.

Introduction

IT HAS BEEN shown that attempts at vaginal delivery in patients previously delivered by Caesarean section do not substantially increase the risk to the pregnant mother (McGarry, 1969; Chew and Lum, 1976) There are others who advocate elective repeat Caesarean section in these patients (Theobald, 1949; Greenhill, 1962). The main fear for allowing these patients who were previously delivered by Caesarean section an attempt at vaginal delivery is that of scar rupture. A few of the reported incidences of scar rupture are given in Table I. As could be seen the incidence of lower segment scar rupture ranges from 0.2 to 2.7 per cent. Thus the risk of scar rupture especially in lower segment scar is low.

The consensus of opinion is to allow these patients a "trial of scar" if there are no indications which warrant an elective repeat Caesarean section, especially mechanical factors. One of the mechanical factors is the size of the foetus.

Methods & Materials

In a survey of 39,613 deliveries at the Maternity Hospital, Kuala Lumpur over 3 years from 1973 to 1975, there were 454 patients who had a previous delivery by Caesarean section. Of these, 165 (36.3 per cent) patients had an elective sepeat Caesarean section and the indications are reported elsewhere (Chew and Lum, 1976).

289 (63.7 per cent) patients were allowed a trial at vaginal delivery. Of these 179 of them had a

Table I

Reported Incidence of Rupture Of Previous Caesarean Section Scar

Another	Total		Ruptured Scar		Percentage	
	Classical	Lower Segment	Classical	Lower Segment	Classical	Lower Segment
Browne (1951)	16	76	0	1	0	1.3
Lawrence (1953)	400	449	4	2	1.0	0.4
Baker (1955)		100	–	1	–	1
Winchester and Brown (1954)	262	229	6	1	2.3	0.4
Dewhurst (1956)	84	635	7	3	8.3	0.5
McGarry (1969)		415	–	1	–	0.2
Chew and Lum (1976)	16	438	1	13	6.3	2.7

successful vaginal delivery and the remaining 110 patients had an emergency or non-elective repeat Caesarean section.

The present report is to find out whether the birth weight of the foetus has any influence on the mode of delivery in those patients allowed a "trial of scar".

Findings

Table 2 shows the mode of delivery and the birth weight of the infants. In patients who had vaginal deliveries, the majority of the infants (76.6 per cent) were between 2,500 gms. and 3,499 gms. This is in fact fairly similar to that in patients who had a non-elective repeat Caesarean section where 64.6 per cent of the infants delivered were between 2,500 gms. and 3,500 gms.

13.5 per cent of those who had a successful vaginal delivery had infants between 3,500 gms. and 4,500 gms. or above. Whereas in patients who had a non-elective repeat Caesarean section, 29 per cent of them had infants who weighed between 3,500 gms. and 4,500 gms. or more.

Conclusions

From Table 2, it could be seen that the infant weight has no influence in the majority of patients who had a previous delivery by Caesarean section as regards the mode of delivery if the birth weights were less than 3,500 gms.

Only in infants who had a birth weight of 3,500 gms. or more are there a significant increase in the proportion of patients who had a non-elective repeat Caesarean section over those who had a successful vaginal delivery. (29 per cent had a repeat Caesarean section compared to 13.5 per cent who had a successful vaginal delivery). In fact nearly a third of the patients who had a failed trial at vaginal delivery had infants with birth weight of 3,500 gms. or more. Thus it could be said that if the foetus is 3,500 gms. or more, it is more likely that the pregnant mother who had a previous Caerarean section will need a repeat section for the present pregnancy.

Summary

In patients who had a previous delivery by Caesarean section, it is found that in patients giving birth to babies with birth weights of less than 3,500 gms., there is no significant increase in the proportion of patients who required a repeat Caesarean section and those who had a successful vaginal delivery. But in those patients who gave birth to babies weighing 3,500 gms. or more, there is a significant increase in the proportion of patients who had a non-elective repeat Caesarean section.

Table 2

Inflnence Of Baby's Weight On Mode Of Delivery In Patients Undergoing Trial Of Scar

Weight (grams)	Vaginal Deliveries					Repeat C.S.
	Spontaneous	Breech	Forceps	Vacuum	Total	
Less than 2000	4	–	1	–	5 (2.8%)	2 (1.8%)
2000 – 2499	10	–	3	–	13 (7.3%)	5 (4.5%)
2500 – 2999	41	5	11	2	59 (33.0%)	34 (30.9%)
3000 – 3499	49	2	24	3	78 (43.6%)	37 (33.7%)
3500 – 3999	12	–	6	–	18 (10.1%)	26 (23.6%)
4000 – 4499	4	–	1	–	45 (2.8%)	6 (5.4%)
4500 or more	–	1	–	–	1 (0.6%)	–
Total	120	8	46	5	19	110

Percentages in brackets.

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