VAGINAL DELIVERY FOLLOWING CAESAREAN SECTION

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SYNOPSIS

A retrospective analysis was made of 271 patients who had previously undergone caesarean section and who were considered suitable for a trial of vaginal delivery. Sixty-five percent of patients delivered vaginally. Patients who had primary section due to cephalopelvic disproportion or failure to progress were more likely to require a repeat section although 46% of these patients still achieved a vaginal delivery. Patients who had had a vaginal delivery prior to or subsequent to the caesarean section had a low incidence of repeat caesarean section. Xray pelvimetry was found to be of limited value in predicting the outcome. Intravenous oxytocin was used in 11% of patients. There was one case of scar dehiscence and no foetal mortality resulted directly due to the trial of vaginal delivery. Trial of vaginal delivery following caesarean section is a relatively safe procedure when conducted in an appropriate hospital environment under careful surveillance throughout labour. Proper selection of such cases, however, play a crucial role.

INTRODUCTION

In 1916 Edward Cragin (1) pronounced that "once a caesarean section, always a caesarean section." Consequent upon the immense advancement in obstetric practice it is now possible to allow many patients to undergo a trial of vaginal delivery who had one previous caesarean section. Because uterine rupture is a rare occurrence, during a properly conducted labour in a patient with a lower uterine segment scar (2) it is now possible to monitor the mother and the foetus with more sophisticated equipments than was possible in the past. Secondly, there has been an abrupt increase in the primary caesarean section rate with some centres having reported rates up to 20% (3).

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MATERIALS AND METHODS

The case records of all patients who had previously been delivered by one lower segment caesarean section between 1 Jan 84 until 31 Dec 84 were studied. The following information were obtained: age, parity, previous obstetric history including reason for primary caesarean section, weight of the previous largest infant, pelvimetry if performed, details of pregnancy under study including gestation, length of labour whether induced or spontaneous and use of oxytocis.

RESULTS

During the period studied; 49 elective caesarean sections were performed in patients with a history of previous sections. The remaining 271 patients were allowed to have a trial of scar. The mean age of patient was 26, with a range of 18-41 years.

Among the 271 patients who were allowed a vaginal delivery, 256 patients (94.5%) were delivered by caesarean section in their only previous pregnancy. Of hte remaining 15 patients, 9 patients (3.3%) had one or more vaginal deliveries and a previous section and 6 patients (2.2%) had one vaginal delivery since the caesarean section had been performed.

Of the 271 patients who were allowed a vaginal delivery, 95 (35%) were ultimately delivered by a repeat section and the remaining 176 (65%) achieved a vaginal delivery. Forty-four patients (25%) were delivered by low forceps and 132 (75%) had a normal delivery. Among the 15 patients who had had a vaginal delivery either before or after the caesarean section, 13 (86.7%) had a vaginal delivery and only 2 patients (13.3%) required a repeat section.

The outcome of the trial of vaginal delivery in relation to the indication for primary section is given in Table 1.

One hundred and eighty-four patients had an xray pelvimetry done during antenatal period. Patients with a true conjugate of 10 cm or less had a higher incidence of caesarean section than patients with a true conjugate of more than 11 cm. It is of interest to note that among the 87 patients who were not subjected to pelvimetry, 54 patients (62%) had a vaginal delivery. There were 56 patients whose babies weighed 3500-4000 g. In this group 42 patients (75%) were delivered by caesarean section.

Labour was augmented with oxytocin in 29 patients (11%). In this group 18 patients (62%) had a vaginal delivery. There was one case of scar dehiscence in this study and oxytocin was ot used in this patient. None of the foetal deaths were directly attributed to the trial of vaginal delivery.

There were two cases of macerated stillbirths and one case of fresh stillbirth in this series. Fresh stillbirth occurred in an unbooked case with thick meconium stained liquor. Foetal heart was not heard on admission and the patient delivered a fresh stillbirth soon after delivery.

DISCUSSION

The indication for the previous caesarean section appears to have a great prognostic significance for a successful vaginal delivery. Patients who had undergone primary caesarean section due to cephalopelvic disproportion or failure to progress in labour had the lowest success rate of vaginal delivery (4). These are traditionally known indications for caesarean section.

The prognostic significance of the presence of a previous vaginal delivery was evaluated and it appears as though that the presence of a vaginal delivery either prior or subsequent to the initial caesarean section improved the chances for a successful vaginal delivery. The current study also showed a higher incidence of caesarena section when the foetal weight varied between 3500-4000 g thus highlighting the important of estimation of foetal weight in the selection of such cases.

Many authors have recommended that xray pelvimetry should be performed in all patients in with a previous caesarean section in whom vaginal delivery is considered. In the present study xray pelvimetry was

TABLE 1
OUTCOME OF TRIAL OF VAGINAL DELIVERY IN RELATION TO THE INDICATIONS FOR PREVIOUS CAESAREAN SECTION AND MODE OF DELIVERY

Indications	N = 271	Outcome			
		Vaginal Delivery		Caesarean Section	
		N = 176	%	N = 95	%
1. Cephalopelvic Disproportion and no progress in labour	82	38	46	44	54
2. Foetal Distress	91	68	74	23	26
3. Antepartum Haemorrhage	45	30	66	15	34
4. Breech	42	33	78	9	22
5. Others	11	7	64	4	36

found to be of limited value in predicting the outcome since a large number of patients delivered vaginally without a pelvimetry (Table 2). A good clinical pelvimetry has a definite role ot play in this regard.

Contrary to the common belief that oxytocin increases the risk of uterine rupture in the presence of a scar, this series has shown that, oxytocin if judiciously used is relatively safe. This was also the experience of McGarry (5).

An overall vaginal delivery of 65% was achieved in this series and it appears that vaginal delivery is relatively safe after a caesarean section when properly conducted. Furthermore, cephalopelvic disproportion is not per se a contraindication to subsequent vaginal delivery.

TABLE 2
OUTCOME OF TRIAL OF VAGINAL DELIVERY IN RELATION TO XRAY LATERAL PELVIMETRY

Results of Xray pelvimetry	Incidence of caesarean section %
True conjugate 10 cm	53
10.1 — 11 cm	27
11 cm	19

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