OUTCOME OF POST CAESAREAN PREGNANCY IN A TERTIARY INSTITUTE IN SOUTH INDIA

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SUMMARY

Prospective analysis of 700 women with post caesarean pregnancy has revealed a high rate (59.43%) of repeat caesarean section and a low rate (27%) of successful trial of vaginal delivery. A high incidence (77.75%) of CDP was the major cause of repeat caesarean section which appears to be due to poor nutrition during childhood and adolescence in this predominantly rice eating community in South India. The scar rupture was only 0.3% in abdominal delivery, as against 1.3% in vaginal delivery, which was due to increased rate of elective repeat caesarean section.

INTRODUCTION :

The more frequent use of caesarean delivery in the United States during the last 15 years has engendered considerable interest and concern. In 1980, a National Institute of Health (NIH) Consensus Development Conference on Caesarean Section was convened to review this issue. It recommended a departure from the practice of automatic repeat caesarean section and suggested that vaginal birth after caesarean section might help to reduce the rate of operative delivery. E.B. Craigin's dictum of "Once a caesarean, always a caesarean", although often quoted, is usually misunderstood and misapplied to current practice when almost practically lower segment caesarean sections are done (Martin James and Morrison John, 1988). Dhall et al (1987) from North India have reported that 76.6% of repeat caesarean sections had vaginal delivery.

Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, is a referral Institute of tertiary level where the rate of caesarean section has increased from 12.3% in 1982 to 27.6% in 1988 and the repeat section showed a significant increase from 17.6% in 1982 to 40.9% in 1988 (Arora and Oumachigui 1991). The rate of caesarean section showed very little change in relation to parity and antenatal care. This led us to have the present prospective study to find out the outcome of post caesarean pregnancy in 700 consecutive cases in our situation.

MATERIALS AND METHODS :

The present study was conducted in Obstet-

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rics and Gynaecology Department, JIPMER, Pondicherry, from 1st June 1989 to 31st May 1991. Cases with previous caesarean section were booked in the antenatal clinic with a detailed obstetric history regarding place, indication and type of primary caesarean section, birth weight and present status of the baby and any complications in the postoperative period. Detailed obstetric findings in relation to foetus and pelvis were noted. Those who attended the hospital from a far-off place were examined regularly and admitted at 36th week. Those who attended from a nearby place were admitted after 38 weeks. In the same way, detailed history was taken in patients who were admitted in emergency.

After admission and complete work up, they were examined by senior doctors (consultants) for proper pelvic assessment to decide the mode of delivery. X-ray pelvimetry was done as a routine wherever possible to rule out any doubts in the assessment of cephalopelvic disproportion and gross foetal abnormalities. The help of ultrasound was also taken. One unit of blood was cross-matched and kept ready in all cases. When indicated, syntocinon drip was used under strict vigilance and pregnancy terminated at the slightest possible indication.

Patients selected for trial of vaginal delivery were carefully monitored throughout the labour. When labour progressed satisfactorily, outlet forceps or vacuum extraction was applied as a routine to cut short the second stage of labour and a gentle exploration of lower segment was done routinely to rule out any rent in the previous scar. If the labour ended in repeat section, details of the state of lower segment, previous scar, any adhesions and location of placenta were recorded.

Sterilisation was done in all cases except in those who refused or had no living baby or at the advice of neonatologists against sterilisation.

RESULTS :

The total number of patients with previous caesarean section was 700 in two years. The booked cases were 60% as against only 40% amongst all antenatal patients. Four hundred and twenty-four (60.57%) patients were in the age group of 20-25 years and 200 (28.57%) between 26-30 years. Rest were more than 30 years of age. Eighty per cent of patients were para I.

The indications of previous caesarean section were recurrent in 320 (45.71%) patients and non-recurrent in the remaining 280 (40%) patients (Table I). Ninety per cent of these previous sections were done in our Institute. Twenty-two of these patients had secondary suturing in the post operative period.

Of 26 patients who had obstructed labour, 6 had impending rupture of uterus and 2 had vesico-vaginal fistula post-operatively and 2 patients delivered stillborn foetus. Elective repeat caesarean section was done in 416 patients (59.42%). The main indications were CPD (77.75%), previous multiple caesarean sections (11.75%) and malpresentations (10.80%) (Table II).

Six patients had recurrent breech presentation, the cause being bicornuate uterus (one with septate vagina). Four patients had septate uterus. Thirty-five patients with CPD had previous intrapartum of early neonatal death of the baby. Concurrent sterilisation was done in 90% of these cases.

Out of 284 patients, trial of vaginal delivery was given in 274 patients and 10 were discharged on request or left against medical advice and lost to follow up. Intrapartum emergency caesarean section was done in 200 patients. The main indications were premature rupture of membranes (25.5%), arrest of labour (14%), scar tenderness (9%) and obstructed labour (9.5%). Placenta previa type I was present in 19 cases and type III in only one case in which placenta was adherent to the scar. The placenta was fundal in other 6 cases of placenta accreta.

Of all the cases of emergency intrapartum caesarean section, lower segment was thinned out in 34 cases, meconium stained liquor in 48

TABLE - I

Indications of previous caesarean section

Indications		No.	% age
CPD	..	288	41.14
Failed trial of vaginal delivery	..	43	6.14
Obstructed labour	..	40	5.71
Previous rent repair	..	2	0.28
Previous metroplasty, myomectomy, vaginoplasty and VVF repair	..	4	0.57
Incomplete rupture of uterus	..	1	0.14
PIH	..	51	7.28
Premature rupture of membranes (PROM)	..	54	7.71
Malpresentations and malpositions	..	69	9.85
Cervical dystocia	..	10	1.42
Incoordinate uterine action	..	14	2.00
Past dates	..	13	1.85
APH	..	10	1.42
BOH	..	34	4.85
Others	..	16	2.28
Unknown	..	20	2.86(94)
Total	...	700	100.00

TABLE - II

Indications of elective repeat caesarean sections

Indications		No. (n - 416/700)	% age
CDP	..	311	44.42
Previous two sections	..	44	6.28
Previous three sections	..	3	0.42
Malpresentations : Transverse lie Breech	..	19	2.71
Breech	..	26	3.71
Previous classical section	..	1	0.14
Incisional hernia (with herniorhaphy)	..	5	0.71
Twin pregnancy with PIH	..	1	0.14
Previous rent repair	..	2	0.28
Previous plastic operations	..	4	0.57

* Number varies from Table I because of overlapping of newly diagnosed cases.

TABLE - III

Indications of intrapartum caesarean section

Indications	No.	% age
PROM with non-progress (Severe intrauterine Sepsis in 2) ..	51	25.5
Incoordinate uterine action ..	14	7.0
Arrest of labour ..	28	14.0
Obstructed labour (impending rupture in 2) ..	19	9.5
Scar tenderness ..	18	9.0
PIH (Imminent eclampsia in 3 and eclampsia in 1) ..	29	14.5
Past dates with failed induction ..	12	6.0
Foetal distress ..	16	8.0
APH ..	10	5.0
Couvelaire uterus ..	1	0.5
Gestational diabetes with BOH ..	2	1.0
Total ..	200	100.0

and scar rupture in 2. Both the cases of scar rupture had previous inverted T-shaped incision, of which one was done outside JIPMER and she came in late labour. The baby was alive and repair with tubectomy was done. The other patient was kept for elective caesarean section but she went into labour the next day after admission in which scar had already given way by the time she was taken up for caesarean section. As the scar was very ragged and not repairable, caesarean hysterectomy was resorted to. The baby was fresh still birth.

Maternal mortality was nil. Maternal morbidity was mainly in the form of one caesarean hysterectomy, one burst abdomen, 14 urinary tract and 16 wound infections. Out of two scar ruptures in vaginal delivery, one was in a patient admitted with cord prolapse and fully dilated cervix and rupture occurred after spontaneous vaginal delivery of a fresh stillborn foetus. The rent in the lower segment was detected after delivery and repaired immediately after laparotomy.

Out of 274 patients, 74 (27%) had successful trial of vaginal delivery (Table IV). All these patients had spontaneous onset of labour, except 5 in whom syntocinon was used for induction or augmentation. Cervical dilatation was more than 3 cm. at the onset of labour in 56 (70.67%) patients. Sixteen patients had history of vaginal delivery before or after the previous caesarean section. One patient had twin delivery with breech extraction of second of the twins, the birth weight being 2.8 kg. and 2.9 kg.

Cord prolapse, anencephaly and prematurity were the causes for foetal mortality in 3 cases. The cause for stillbirths in 7 of the repeat caesarean section group were prematurity in 2, abruption with PIH in 1, metabolic disorders in 1 and meconium aspiration in 3 cases. One preterm baby had cleft palate and ambiguous genitalia.

The neonatal morbidity was in the form of congestive cardiac failure in one baby (on which it recovered) and superficial cuts over the ears of two babies at the time of incision over the lower segment.

TABLE - IV

Different methods of vaginal delivery

Method		No. n = 74/700	% age
Spontaneous	..	32	4.57
Vacuum extraction	..	17	2.42
Outlet forceps	..	22	3.14
Vacuum and forceps	..	2	0.28
Assisted breech (1.8 Kg)	..	1	0.14

DISCUSSION :

Our study has showed that 416/700 (59.42%) had repeat caesarean section due to recurrent indications, the most common cause being cephalopelvic disproportion due to contracted pelvis (77.75%). A study from the Postgraduate Institute, Chandigarh (Dhall et al, 1987) has showed the rate of repeat section as 50.2%, where as another study from Bombay (Allahabadia et al, 1989) has showed a very low rate (24.2%). Wadhawan and Narone (1983) from Zambia have shown the rate as 49.2% and Nielson and Hokeguard (1984) as 38%. Mostly the patients in this part of the country are short statured with generally contracted pelvis and jutting forward of the lower part of sacrum as a peculiar feature. Being predominantly rice eating community, poor nutrition especially protein intake in the childhood and adolescence seems to be the underlying reason for the short statute and contracted pelvis in our cases.

The rate of successful trial of vaginal delivery in the present study is very low (27%) when compared to other studies. Allahabadia et al (1989) from Bombay has reported 75.7% in 260 patients, Dhall et al (1987) 76.6% in 583 patients, Flamm et al (1984) 86% in 6,252 patients and Lavin et al (1982) 67% in 3,214 patients. Flamm (1985) in his review of 21 reports of different authors from 1980 to 1984 has observed an overall success rate of 79% and has felt that given an adequate trial of vaginal delivery, atleast 3 out of 4 women can deliver vaginally after a previous section.

The commonest cause of failure in trial of vaginal delivery in our patients was premature rupture of membrane for more than 6 hours giving rise to dry labour with a danger of intrauterine sepsis. As such, high incidence of PROM in our cases needs further investigation. Other causes of failed vaginal trial were foetal distress, obstructed labour and scar tenderness of which 34 patients had thinned out lower segment. The largest and the most recent series of 159 patients (Phelan et al, 1988) reported a successful trial of vaginal delivery in 72% of gravidas in two prior sections and 9 of 10 gravidas with three prior sections.

A review of the cases between the years 1950 and 1980 by Lavin et al (1982) identifying over 100 vaginal trials in patients with multiple prior sections and the reports by Meier and Porreco (1982) and Wadhawan and Narone (1983) in 21 and 31 patients respectively, suggested that trial of vaginal delivery is reasonable and safe. However, it was not given to our patients who had more than one previous section, as we did not consider it safe for the patients with multiple scars especially in the poor by built and undernourished group of patients.

Though the number of cases in our study is small, it is observed that spontaneous onset of

labour, birth weight of the baby less than 3 Kg, cervical dilatation 3 cm or more at the onset of labour, and vaginal delivery before or after the previous caesarean section are the favourable factors for successful vaginal delivery. Similar observations have been made by Dhall et al (1987) and Benedetti et al (1982).

The incidence of scar rupture (2/616; 0.32%) in repeat caesarean section cases (none in elective) was very low as compared to one case (1.3%) in vaginal delivery. Comparatively higher incidence of 1.02% in lower segment and 18% in classical scar rupture has been reported by Dhall et al (1987). They have also reported high perinatal mortality (250/1000) whereas we had only 2 foetal deaths out of 700 cases (0.29%) where the patients came in emergency. Low mortality rate in our study appears to be due to the fact that the patients who had more than one previous caesarean sections were not given trial of vaginal delivery.

The incidence of placenta previa in our study was 3.24% of all previous section cases, which is in agreement with the statement of others (Singh and Gupta, 1981; Clark et al, 1985) that uterine scar predisposes to later placenta previa.

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