Original Article

Ceasarean Section

Outcome of Trial of Labour with Previous One Ceasarean Section

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ABSTRACT

Objective: To determine fetomaternal outcome of trial of labour in patients with Previous One Ceasarean Section.

Study Design: Descriptive Case Series based on hospital data.

Place and Duration of Study: This study was conducted at the Obstetrics and Gynaecology Department, Shahina Jamil Teaching Hospital Abbottabad, from February 2013 to August 2013.

Materials and Methods: Total 100 cases were selected. During trial of labour, patients were closely monitored by vital signs, fetal cardiac activity, lower abdominal pain and tenderness, fetal distress.

Data was collected on proforma and written informed consent was taken on consent form. The permission was taken for hospital committee and the data was analyzed for results.

Results: 61 cases (61 %) had successful vaginal delivery while 39 (39 %) patients ended up with repeat emergency caesarean section after failed trial of labour. Out of 61 vaginal deliveries, 53 cases (86.88%) belong to age group 20-30 yrs, while 8 cases (13.12%) were between 31-40 years. Out of 39 cases, 36 cases (92.30 %) belonged to age group of 20-30 years while 3 cases (7.7 %) had age between 31 to 40 years. Distribution of cases, according to fetal distress in patients with emergency caesarean section shows that out of 39 cases, 12 cases (30.70 %) developed fetal distress and 27 cases (69.23 %) were without fetal distress.

Conclusion: This study shows that patients with Previous one caesarean section for non-recurrent indication can be successfully delivered vaginally.

Key Words: Emergency Caesarean Section, Vaginal delivery Trial of scar.

INTRODUCTION

Caesarean Section rate has been increasing both in developing and developed worlds. It carries 3/4th risk of mortality compared with vaginal deliveries[1]. Caesarean Section rate has increased to alarming extent in the last three decades the world over and fear of rupture of uterus in subsequent pregnancy and labour has lead to high rate of repeat Caesarean Section. More than 75 % of patients with Previous One Caesarean Section for non-recurrent cause can be successfully delivered vaginally[2]. Well monitored trial of scar leads to increased percentage of vaginal deliveries, which is a contribution to bringing down the rising rate of Caesarean Section[3]. The success rate of vaginal birth after Caesarean delivery after trial of labour was 54.4 % in the present study. Several caesarean deliveries could be avoided by the vaginal birth after caesarean delivery policy[4.] Overall, neonatal and maternal outcomes compared favourably among women undergoing a trial of labour versus elective repeat caesarean delivery. The majority of morbidity was associated with a failed trial of labour. Better selection of women likely to have a successful vaginal birth after a prior caesarean delivery would be expected to decrease the risk of trial of labour[5]. Patients who had once Previous Caesarean Section but had previously delivered vaginally, have more chances of successful vaginal delivery than others[6]. If the indications for previous caesarean deliveries were bad obstetric history, little can be achieved from trial of scar[7]. Iqbal-et-all 2004 reported successful vaginal delivery achieved in 72 % and fetal distress was observed in 28.5 %[8]. Trial of labour was associated with the shorter hospital stay. A successful trial of labour after one Caesarean Section associated with the best outcome underscoring the importance of patient selection for a trial of labour[9].

Overall Caesarean Section rate was 57.6% and vaginal birth after Caesarean Section rate was 42.4%, it was thus concluded that repeat Caesarean Section rate could be avoided in well selected patients with low morbidity[10.] This study is designed to observe the outcome of trial of labour with Previous One Caesarean Section in Jinnah Hospital Lahore.

MATERIALS AND METHODS

Study was carried out at Obstetrics and Gynaecology Department, Shahina Jamil Teaching Hospital Abbottabad, from February 2013 to August 2013. Calculated sample was 100 cases with9 % margin of error, 95 % confidence level taking percentage of fetal distress in trial of labour with Previous One Caesarean Section i.e. 28.5 %. Sampling technique was non-probability purposive sampling. Patients included were 20-40 years of age with gestational age 37-40 weeks with spontaneous onset of labour (determined by dating scan), cephalic fetus confirmed on ultrasound, primipara with Previous One Caesarean Section done for non-recurrent cause. Patients with previous classical Caesarean Section, diagnosed cases of hypertension, diabetes and with any contra-indication to vaginal delivery in current pregnancy like Placenta Previa, mal-

presentation and good size baby determined on ultra sound were excluded.100 pregnant patients, fulfilling inclusion and exclusion criteria who were subsequent to a previous delivery by caesarean and had regular ante-natal check up reporting obstetric OPD were taken. An informed consent was taken. Demographic variables like name, age, address was noted. At 37 weeks of gestation decision was taken regarding trial of labour intravenous line was maintained and blood group and cross matching was done pre-hand. Patients were allowed to go in spontaneous labour. Patients were closely monitored during trial of labour by vital signs, fetal cardiac activity, lower abdominal pain and tenderness, fetal distress. Facilities were made available during whole trial of labour for emergency Caesarean Section. Fetal and maternal outcome was vaginal delivery and fetal distress. All this information is noted on proforma. Data was analysed using SPSS version12. Parity, maternal outcome in form of normal vaginal delivery and fetal distress was presented by frequency and percentage and gestational age was presented by calculating mean + SD.

RESULTS

Total 100 patients were included in this study carried out over a period of 6 months at obstetrics and Gynaecology Department, Shahina Jamil Teaching Hospital Abbottabad, from February 2013 to August 2013. Sample size of current study was 100 cases.

Table No 1: Distribution of cases by age having successful vaginal delivery after previous one caesarean section

Age (years)	Cases	Percentage
20-30	53	86.88
31-40	08	13.12
TOTAL	61	100.0
Mean + S.D	29.3+1.4	

Out of 61 vaginal deliveries, 53 cases (86.88 %) belong to age group of 20-30 years while 8 cases (13.12%) were between 31-40 years.

Table No 2: Distribution of cases by age having failed vaginal delivery (emergency caesarean section) after previous one caesarean section

Age (year)	Cases	Percentage
20-30	36	92.30
31-40	03	07.70
Total	39	100.0
Mean+S.D	26.5+1.9	

Out of 39 cases 36 cases (92.30%) belong to age group of 20-30 years while 3 cases (7.7 %) had age between 31 – 40 years.

Table No. 3: Distribution of cases by gestational age in cases of successful vaginal deliveries in previous one caesarean section n=61

Gestational age (weeks)	Cases	Percentage
37-38	21	34.42
38+1-39	25	40.99
39+1-40	15	24.59
Total	61	100.0
Mean+s.d	39.3+ 1.2	

Out of 61 cases of successful vaginal birth 21 cases (34.42%) were between 37-38 weeks of gestation, 25 cases (40.99%) were between 38+1-39 weeks and 15 cases (24.59%) were between 39+1-40 weeks of gestation.

Table No. 4: Distribution of cases by mode of delivery following trial of labour in previous one caesarean section

Mode of delivery	Cases	Percentage
Vaginal delivery	61	61.0
Emergency Caesarean section	39	39.0
Total	100	100.0

Concerning the mode of delivery following trial of labour, out of 100 cases 61 cases (61%) had successful vaginal delivery while 39 (39%) patients ended up with repeat emergency Caesarean Section after failed trial of labour.

Table No. 5: Distribution of cases by fetal outcome in terms of fetal distress in cases of vaginal delivery n=61

Fetal distress	Cases	Percentage
Yes	03	04.92
No	58	95.08
Total	61	100.0

Table 5 shows out of 61 cases, 3 cases (4.9 %) developed fetal distress while 58 cases (95.08 %) had no sign of fetal distress.

Table No. 6: Distribution of cases by fetal outcome in terms of fetal distress in cases of emergency caesarean section

Fetal distress	Cases	Percentage
Yes	12	30.7
No	27	69.3
Total	39	100.0

Table 6 shows distribution of cases according to fetal distress in patients with emergency Caesarean Section. Out of 39 cases, 12 cases (30.70 %) developed fetal distress and 27 cases (69.23%) had no fetal distress.

DISCUSSION

Caesarean Section has been increasing in both developed and developing countries, it causes 3/4th increased risk of mortality as compared to vaginal

deliveries. High Caesarean Section rate has negative impact on maternal health and obstetric care cost, so there is a need to reduce it[11,12]. Caesarean Section rate can be reduced either by reducing primary Caesarean rate or reducing repeat Caesarean rate by subjecting those with previous one Caesarean to trial of labour after thorough assessment and counselling. In current study objective was to determine feto-maternal outcome after trial of labour in patients with previous one Caesarean Section. Successful vaginal births achieved mostly in early ages than in later age. Another study by Bujold et al concluded that successful vaginal delivery is inversely related to maternal age[13,14].

In present study successful vaginal births occurred between gestational age 37-39 weeks. Rate of successful vaginal birth decreases with increasing gestational age. Another study by Smith et al in Cambridge University UK concluded that risk of emergency Caesarean Section increased with increasing gestational age[15]. In this study, out of 100 cases 61 (61 %) achieved successful vaginal delivery while 39 (39%) eneded up with emergency Caesarean Section. Another study conducted by Birgisdottir et al concluded similar results[16,17].

Another study by Butt and Akhtar concluded that 62.8 % had successful vaginal delivery while 34.7 % had emergency Caesarean Section[18,19]. With successful VBAC 3 babies (4.92 %) were found to have meconium stained liquor but all babies were healthy and had spontaneous cry while babies who were delivered through emergency Caesarean Section 12 (30.7 %) developed fetal distress out of 39. All survived and discharged without any neurological deficit or complication. In a study conducted by Homer concluded babies whose mother attempted BBAC were significantly less likely to require admission in neonatal Intensive Care Unit[20,21,22]. No maternal and peri natal mortality seen.

CONCLUSION

This study showed that patients with Previous One Caesarean Section for non-recurrent indication can be successfully delivered vaginally. Antenatal booking and follow up, careful case selection for trial of scar and close observations during labour will achieve successful maternal and peri natal outcome. VBAC also saves any future Caesarean Section, as currently Previous Two Caesarean Sections is an indication for elective Caesarean Section in our setup.

Suggestions: To reduced the caesarean section rate VBAC should be encouraged. Early booking, regular antenatal visits and confinement in hospital should be encouraged.

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