



Study of Outcome of Subsequent Pregnancy following previous Caesarean Section in Katihar Medical College & Hospital, Katihar

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ABSTRACT

Objectives: *Our study was to evaluate the mode of delivery, operative difficulties of post caesarean section pregnancy, Frequency of postpartum complication, foetal and maternal morbidity and mortality in post caesarean section pregnancy, and Indication of subsequent caesarean section, Clinical condition of previous caesarean section scar and placenta and evaluate the foetal outcome between abdominal and vaginal deliveries.*

Methodology: *A total of 150 women cases with age group ≥ 20 years to 40 years of post caesarean section were included in this study. A detail relevant history, assessment, investigation were taken to all cases of post caesarean section. Elective caesarean section was done in cases where there was contraindication of allowing labour and vaginal delivery. Condition of baby was assessed by apgar score at 1 min. and 5 minutes. Special emphasis was given on the weight of the baby in respect to the mode of delivery and complication occurring during labour and delivery. During the first 7 days the baby was observed closely for well being.*

Results: *Data was analyzed by using simple statistical methods with the help of MS-Office software.*

Conclusions: *VBAC was better chance for successful in pregnancy. Recurrent and non recurrent cause of primary caesarean section changes the outcome. Due to lesser number of maternal and perinatal mortality, vaginal deliveries have a much safer outcome than repeat sections. The major cause of perinatal mortality in repeat caesarean was prematurity. To avoid this cause of perinatal mortality, we can wait for each and every patient having previous caesarean section for spontaneous labour keeping everything ready for caesarean section.*

Keywords: *post caesarean section, vaginal delivery, outcomes.*

Introduction

Caesarean section is one of the most commonly performed procedures for women, with almost a third of women in many developed countries experiencing caesarean section when they give

birth. The rate of caesarean section births is increasing and the reasons for this are complex. As a result of this trend, increasing number of women face the issue of mode of delivery in their subsequent pregnancies.^[1,2,3]

There are few issues in modern obstetrics that have been controversial, one of them being management of pregnancy of women with previous caesarean delivery.

In the present scenarios of small families, the baby's right to survival is increasingly recognized and consequently most of the indication of caesarean section are now made for the interest of the baby (Ian Donald-1979). Good obstetrics today means an uncomplicated antenatal period, labour and puerperium for the mother and birth of a healthy baby.

Because widespread emphasis is given to the detection of actual and suspected fetal distress the use of caesarean section has increased at an accelerated rate. Other reasons for increased frequency are elderly primigravida with their inherent complication and reduction in the parity. Specifically half of the pregnant mothers being nulliparous, increased number of caesarean section are being performed for those condition common to nulliparous women especially PIH, particularly in elderly group (Williams obstetrics-21st).

When classical upper segment caesarean section used to be performed in almost all cases of severe cephalopelvic disproportion, the subsequent pregnancy ended in a repeat section almost as a rule so that one time dictum of "once a caesarean section always a caesarean section" seemed appropriate at that age.^[4] This dictum has now been changed in favour of vaginal delivery in post caesarean section cases particularly where the indication was a non recurrent one. There is now substantial evidence demonstrating that vaginal delivery after caesarean section can be accomplished in more than half of the patients without significant risk to either the mother or the foetus.^[5] The perinatal mortality and morbidity rates were similar in planned vaginal birth and elective repeat caesarean section.^[6] However this should be considered only for those who have had as previous lower segment caesarean section. For all practical purpose there is only one type of caesarean section, namely lower segment

operation. It is almost universal adoption has contributed a great deal to the safety of caesarean section regarding the post-operative complications.

The risk of rupture of previous caesarean section scar was reported by Dewhwst (1957) at 2.2% for all cases, 4.7% for those in labour and 8.5% for those delivered vaginally. The figure for lower segment caesarean section was 0.5%, 0.8% and 1.2% respectively. The maternal mortality was 5% for classical scar rupture and perinatal mortality rate 73%. No mother was lost after lower segment scar rupture. The perinatal mortality rate was 12.5%. Menon (1965) reported overall incidence of scar rupture was 5.3%. The incidence of classical scar rupture was 3 times that of lower uterine segment scar 5.6% and 1.8%. In labour the incidence of scar rupture was 8.4% and of lower segment scar 2.3%. Vaginal delivery was successfully achieved in 64.4% with a perinatal loss of 5.6%. The maternal mortality in the classical caesarean section cases was 5.6%. The gross perinatal mortality rate was 12.8%. After vaginal delivery in post Caesarean section pregnancy uterus, should be explored routinely to detect occult rupture as selected by Hindman (1948), Wilson (1951), Moron (1961) advised to avoid such routine procedure, except when rupture was suspected.

William (quoted by J. C. Moir) mentioned that scar united by growth of smooth muscles, subsequent investigations (Siegal, 1952) indicated that fibrous tissue entered largely into the structure of the scar. If the formation of this fibrous tissue be hindered by slightest infection of the wound from uterine cavity there would be reason to believe that the scar would be a weak one. Implantation of the placenta over the scar in subsequent pregnancy is very important regarding the behaviour of the scar and obstetric complication like antepartum haemorrhage and postpartum haemorrhage and scar rupture can occur.

Meticulous care and close monitoring are the prerequisites in conducting vaginal delivery in cases of post caesarean section.

Complications should be diagnosed at an early stage so that we can prevent maternal/ perinatal mortality and morbidity. It is quite natural that difference of opinion or lack of consensus is likely to prevail between different obstetricians with different views and attitudes to the problems.

Aim of our study was to evaluate the mode of delivery in post caesarean section pregnancy, Operative difficulties faced during the management of post caesarean section pregnancy, Frequency of postpartum complication before discharging the mother from hospital, Foetal and maternal morbidity and mortality in post caesarean section pregnancy, Indication of subsequent caesarean section same as before or different, Clinical condition of previous caesarean section scar and placenta and Comparison of foetal outcome between abdominal and vaginal deliveries.

Methods and Materials

The present study was conducted in the Department of Obstetrics & Gynaecology at Katihar Medical College and Hospital, Katihar, Bihar, India during a period from January 2016 to June 2017. The cases under the study were selected from labour room and in patient maternity wards where both booked and unbooked cases and also referred cases from other hospitals and urban centres are being admitted for management. A total of 150 cases of post caesarean section were studied. The attendant/entire subjects signed an informed consent approved by institutional ethical committee of Katihar Medical College, Katihar, Bihar, India was sought.

Selection of Patients

All pregnancy woman carrying more than 28 weeks of gestation with previous history of single or multiple caesarean section delivery was taken. The patients with scars in the uterus due to other

cause like myomectomy or hysterotomy scars were excluded.

A detailed history, clinical examination and investigation were performed to all patients. A Proforma of history, clinical findings management, complication and its outcome were prepared and the findings of each case were documented.

Condition at discharge

All the medical records were reviewed properly to determine the indication of primary caesarean section.

Trial of vaginal delivery was allowed in suitable cases. Maternal conditions, foetal conditions, progress of labour were monitored minutely during trial of labour. Maternal pulse, BP, uterine activity, scar tenderness and foetal heart sound were recorded every ½ an hr, during 1st stage of labour. The progress of labour was assessed by dilatation of Cx, and descent of presenting part at an interval of 3 hrs.

Time of rupture of membrane, be it spontaneous or artificial was noted and colour of liquor near also noted. Signs and symptoms of impending scar rupture was also noted i.e. persistent unexplained tachycardia, suprapubic pain and tenderness vaginal bleeding, failure of progress of labour and alteration of FHR from time to time.

Trial of vaginal delivery was abandoned in favour of caesarean section as soon as any complication or abnormality in the course of labour was detected.

To cut short second stage, forceps was used routinely in almost all cases. Liberal episiotomy being made in almost all cases. After vaginal delivery the patient was observed clinically for 2-3 hrs. for integrity of the lower uterine segment. Lower uterine segment was explored whenever necessary.

Elective caesarean section was done in cases where there was contraindication of allowing labour and vaginal delivery. At the time of operation all the cases were judged regarding intra- abdominal adhesions, difficulties faced during dissection, condition of lower segment of placental position and adhesion.

Puerperium was studied meticulously with special reference to character of lochia, uterine involuntary changes, condition of the breast, pyrexia, and any urinary problem etc. Particular emphasis was given on the occurrence of the following complications, uterine scar dehiscence, puerperal sepsis, retained placenta, postpartum haemorrhage and bladder injury. Nature of abdominal wound healing in all cases of repeat caesarean section were studied elaborately.

Condition of baby was assessed by apgar score at 1 min. and 5 minutes. Special emphasis was given on the weight of the baby in respect to the mode of delivery and complication occurring during labour and delivery. During the first 7 days the baby was observed closely for well being with the total background and results in hand. A through analysis of the whole subject was prepared.

Statistical Analysis

Simple statistical analysis method was used to analyzed the data with the help of MS-Office software.

Observations

This study was conducted in department of Obstetrics and Gynaecology, Katihar Medical College and Hospital, Katihar during a period from January 2016 to June 2017. During this period, total delivery was 5230. Among those, vaginally delivered during the period were 3293 (62.96%) and caesarean sections were 1376(26.31%). Repeat sections were 561 (10.73%) of the total deliveries. Total 150 cases of Post caesarean section with age group ≤ 20 to 40 years were studied in this study.

In this study, 10(6.67%) cases were in age group of ≤ 20 years, 80(53.33%) cases were in age group of 21-25 years. 48(32%) cases were in age group of 26-30 years, and 12 cases were in age group of 31-40 years.

Parity in Post-caesarean cases: 92(61.33%) cases were Para I, 40(26.66%) cases were Para II and 18(12%) cases were Para III.

In this study, majority of patients 84(56%) were belonged from lower socioeconomic status. Among them 17(30.35%) were vaginal delivery and one case was hysterectomy.

In our study, cephalopelvic disproportion was present in 30 (20%), foetal distress in 15 (10.00%) cases and failure of induction was in 24(16%) cases. The commonest indication of primary section was cephalopelvic disproportion.

Rate of post operative wound sepsis was highest among all the post operative complication. It was 40%. 2(1.33%) cases had shown evidences of peritonitis but they were managed simply by 4-hourly suction and drip maintained for 48 hours.

Out of the 150 cases in our study, major complications like antepartum haemorrhage, doubtful scar weakness, malpresentation, pregnancy induced hypertension, anaemia and diabetes mellitus were appeared in 56 cases (37.33%).

Out of 150 cases, 120 (80%) were booked in antenatal clinic, of which 99 (82.5%) were delivered by Caesarean section and rest 21 (17.5%) per vaginum. Total perinatal mortality in the booked group was 7 (58/1000). One subtotal hysterectomy had to be done due to rupture of lower segment in each group.

Out of 150 cases, 30 cases were unbooked of which 22 (73.33) cases were delivered by caesarean section and rest 7 (23.33%) per vaginum. Perinatal mortality was 5 (167/1000) quite higher than the booked group. One subtotal hysterectomy was done due to rupture of previous lower segment scar.

In this study, incidence of caesarean section in the present series was 80% i. e. 120 out of 150. Rest were delivered via naturalis. Hysterectomy was done in 2(1.33%) cases due to rupture of previous scar.

Out of 150 cases 70 were put for vaginal delivery. Delivery in 42 cases ended in caesarean section and rest 28 delivered vaginally. 80 cases directly put for caesarean section. Two cases ended in hysterectomy. Both of which were due to Scar

rupture. After confirmation they were immediately put for caesarean section.

When labour was induced by stripping of membrane and ARM, 40% delivered vaginally and rest 5 underwent caesarean section of which two, due to failure of induction in post dated pregnancy, one due to scar tenderness and two due to fetal distress.

In addition to above two methods of induction when syntocinon drip combined with them, for augmentation, outcome was better, 12 cases delivered vaginally and in 3 cases caesarean section had to be done, in 2 cases there were scar tenderness and in one case there was foetal distress. Incidence of forceps delivery was higher than normal delivery. Findings was shown 71.42% forceps delivery. Always the purpose was to cut short the second stage. Findings of this study shows that cases who got pregnant after 2 years but within 4 years of previous section, had maximum (28.57%) vaginal delivery. Patients whose trial of labour had started at home delivered more 24(21.81%) vaginally than the patients who were admitted before labour. Two cases of obstructed delivery were admitted during labour with scar rupture and hysterectomy was done. Study shows out of 150 cases 40(26.67%) cases had got previous history of vaginal delivery and 12(30%) out of 40 cases delivered vaginally. The rate is higher (30%) than the group with no history of vaginal delivery.

In this study, Vaginal delivery was substantially higher (70%) in patients with previous successful VBAC.

Findings of this study shown the 10 cases were of Malpresentation. Major cause of repeat sections were 28(23.33%) cephalopelvic disproportion. Threatened scar rupture were in 24 (20%) cases. Previous two caesarean sections were in 6 (5%) and Malpresentation were in 10 (8.33%) cases.

In this study, the incidence of vaginal delivery was maximum (66.67%) where previous indication was pregnancy induced hypertension. 79.16% of patient having previous section due to premature rupture of membrane underwent

caesarean section, during their present pregnancy but the indications were different.

Findings shows that recurrent indication like cephalopelvic disproportion recurred in 93.33% of cases. Malpresentation was also recurrent in the present series.

Study shows that among 80 cases directly selected for repeat section, premature rupture membrane topped the list. All the cases having Bad Obstetric History were not put for trial at all.

Findings shown that maximum Vaginal Delivery was achieved when the baby weight was between 2.01 Kg. to 2.50 Kg. 4 cases weighing less than 1500 Gm. Underwent Caesarean section, 2 due to severe antepartum haemorrhage, 1 due to IUGR, 1 due to eclamsia. Both the scar rupture occurred when the baby weight was moderate to big size.

In present series 9 babies died in the repeat section group. Of which 4 babies were extremely underweight and premature, 3 had to be delivered at 34 weeks due to Antepartum Haemorrhage and 2 died after the scar ruptured.

Findings shows that 4 patient had got placenta praevia. All were delivered by Caesarean section. 4 patients had got placenta located over the previous caesarean scar. One of them had got adherent placenta which had to be removed part by part. There was profuse bleeding from the site. Layers were given rapidly and then hot mops applied over the site before the closure. Bleeding stopped but later on 2 bottles of blood were transfused.

In this study, 75% of scars having scar tenderness were unhealthy. Extreme thinning of lower segment was noted in 14 cases. 4 cases had got dehiscence of scar. 2 cases had demonstrated definite rupture. The scar was completely healthy in 6 cases.

In the present study out of 150 cases there were dehiscence or rupture in 6 cases (4%). There were dehiscence in 4 cases which were sectioned due to scar tenderness. The two cases of rupture were due to obstructed labour, one in a case of abnormal uterine action, other in a case of

pregnancy induced hypertension. Both of them underwent hysterectomies and babies Table shows that post partum complications were definitely higher in repeat section group. Rate of

non union of wound was 5%. The two cases of haematuria occurred in two rupture uterus which persisted for 3 to 4 days. Catheter was kept for 6 days.

Table.1.Hospital stay after repeat section & vaginal delivery

Type of Delivery	No. of cases	1 to 7 days		8 to 14 days		More than 14 days		Average Hospital stay	
		No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
		Repeat Section	122	60	49.18	50	40.98	12	9.83
Vaginal Delivery	28	26	92.85	2	7.14			4 days (Approx.)	

Table 1 shown that in repeat section group duration of hospital stay was always more than vaginal delivery. Approximate stay in repeat

section was 10 days and in vaginal delivery 4 days.

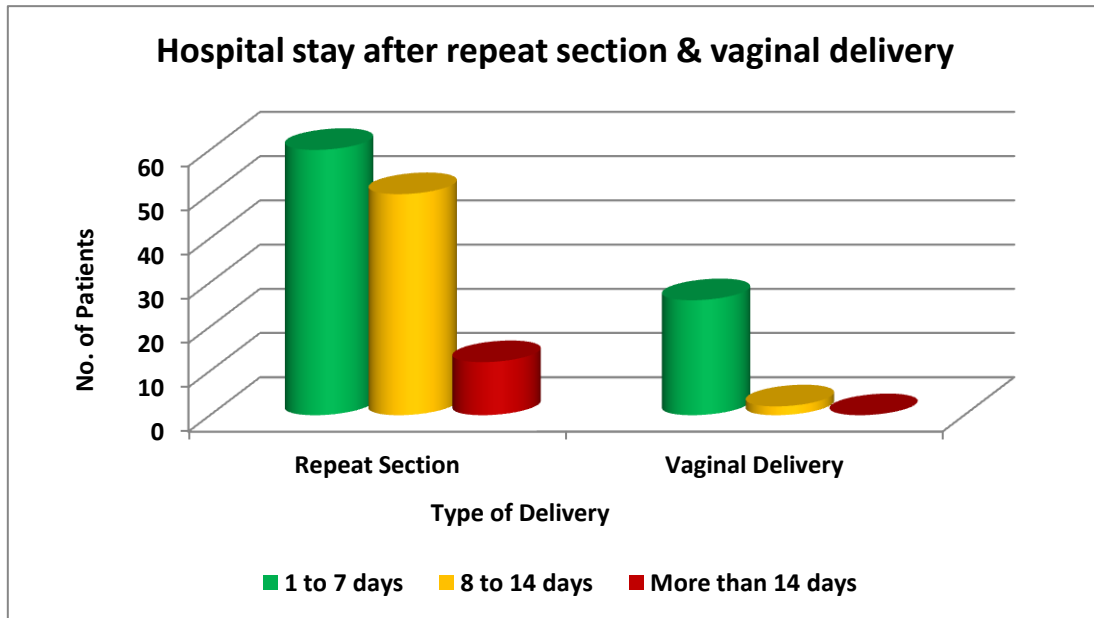


Table.2. Maternal Mortality

Method of Delivery	No. of cases	Maternal Death	Percentage
Repeat Section	120	-	-
Vaginal Delivery	28	-	-
Hysterectomy	2	-	-

There was no maternal death in the present series.

Figure.1. Maternal mortality

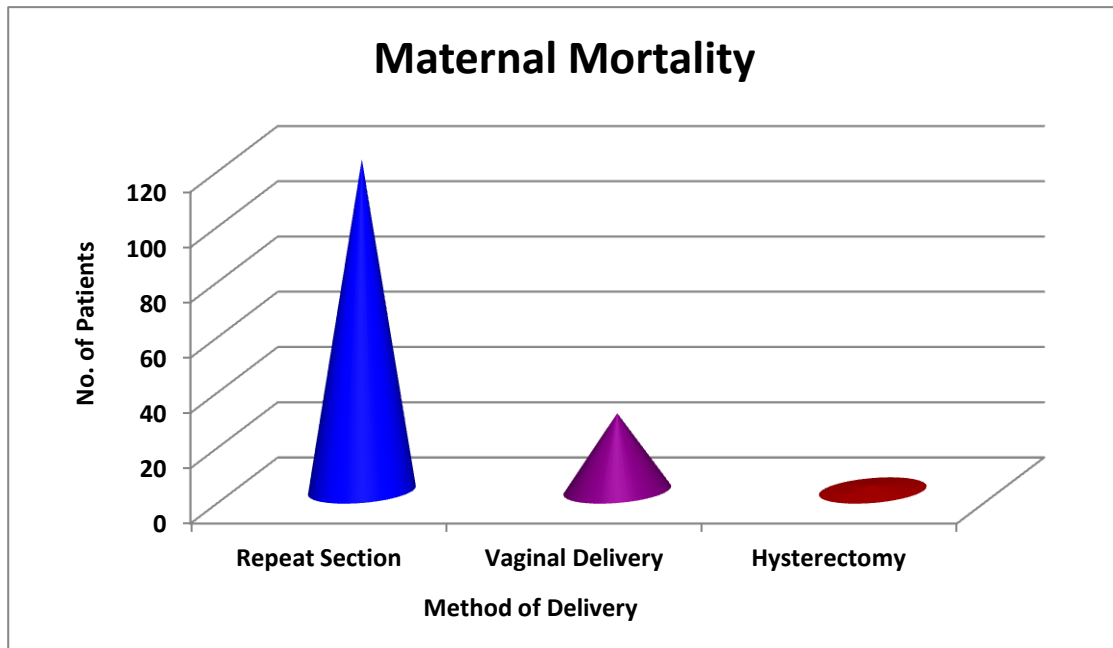


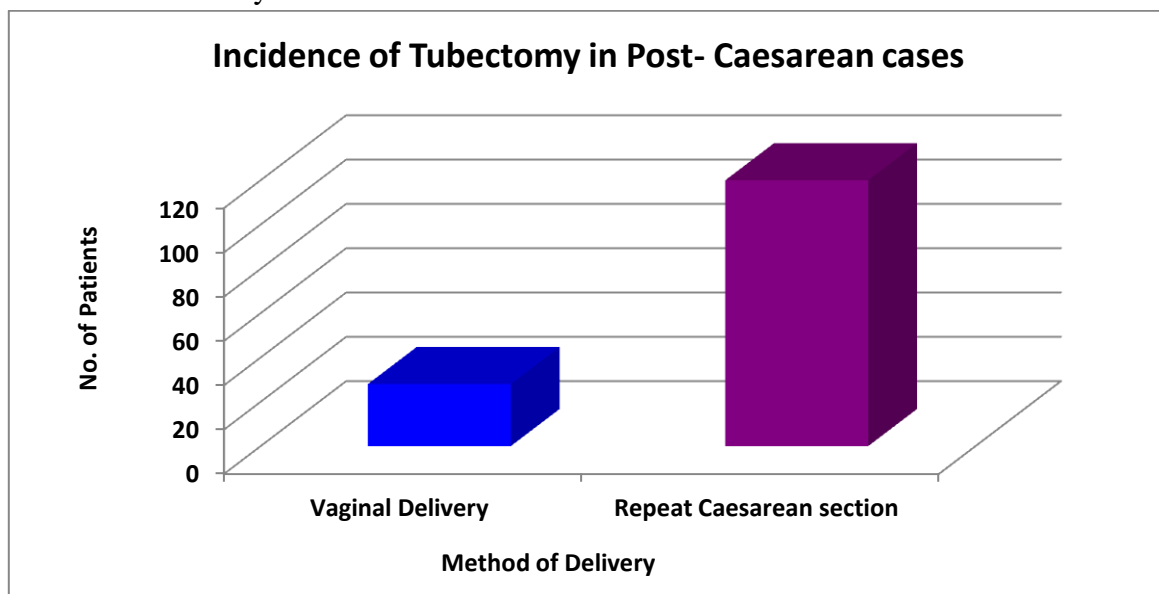
Table.3. Incidence of Tubectomy in Post- Caesarean cases

Method of Delivery	No. of Total Cases	No. of Tubectomy	Percentage
1. Vaginal Delivery	28	6	21.42 (Out of 28)
2. Repeat Caesarean section	120	70	58.33 (Out of 120)

Rate of tubectomy was higher 58.33 in repeat section group. In 18 cases ligation were done without prior consent as the scar was grossly thinned out and during delivery of baby extended laterally.

In vaginal delivery group tubectomy incidence was 21.42%. The patient party had given their consent during admission but most of them denied tubectomy after their delivery.

Figure.2. Method of delivery



Discussion

In the present series the rate of Caesarean Section was 26.31%. Dutta (1987) from Calcutta observed the rate of Caesarean section is 10 percent among the hospital deliveries. Flamm and colleagues reported an incidence of 8.6% and Pickhardt reported an incidence of 11.7%.^[7,8]

The gradual rise in the incidence of post caesarean pregnancy is also due to increased no. of primary sections.

Age and Parity

In the present series most of the cases were found in the age group of 20 to 25 years. They included 53.33% of total cases. Most of the cases were primiparas which was 60% of total cases. Dina Patel (1982) reported maximum number of cases in the age group 31 to 35 years. Parity was just like the present study.

Socio-economic status

Study showed that incidence of vaginal delivery was maximum 30.35% among the lower class group which formed the chunk of the study (53.33%) and no vaginal delivery among the higher class group.

Difference of outcome among booked and unbooked cases

In the present series 120 (80%) patients were booked and 30 (20%) cases were unbooked. Among the booked patients incidence of caesarean was 81.67% and among the unbooked the same was 73.33%.

Among 150 cases 110 cases were admitted before labour and percentage of caesarean section among them was 90.91%. The rest 40 cases were admitted during labour and incidence of caesarean section among them was 52.5%. The two cases of rupture scar were among those 40 cases. Jarrell et al (1985) showed that patient who had got successful vaginal delivery was admitted 26% more often in active phase of labour than whose trial of labour ended in repeat caesarean section.

Antenatal complication in post caesarean section pregnancy: Anaemia. There were total 5 cases of pregnancy induced hypertension. Among them 3 were delivered by caesarean section, one

delivered vaginally and 1 of the 5 cases presented rupture scar in which sub- total hysterectomy had to be performed. **Antepartum Haemorrhage,** There were total 4 cases of placenta praevia and incidence of 2.67%. The overall incidence was 1.63%. This high incidence in case of post caesarean pregnancy also reported by Brown, Hyner (1985) being 4.40%, Douglas (1967) being 2% and Duckering (1946) being 2.50%. c) Malpresentation

Previous history of vaginal delivery

In the present series the incidence of vaginal delivery in the group having previous history of vaginal delivery was 30% compared to the group having no history of previous vaginal delivery was 14.54%.

Incidence of previous section and mode of present delivery

Among the 150 post- caesarean cases studied, 30 had their section previously due to cephalopelvic disproportion out of this 30 cases, 2 (6.67%) were delivered vaginally and rest 28 by caesarean section. That was the commonest indication of previous section in this series. It proves that previous indication of cephalopelvic disproportion was justified in almost all cases on the contrary, Schmitz and Gazewski (1951) 20 primipara and 7 multipara who delivered vaginally larger infants than those for which they were originally sectioned with disproportion as the main indication.

Result of trial of labour

The incidence of vaginal delivery in the present series was 18.67% (28 cases). The incidence of caesarean section in the series was 80%. Incidence of hysterectomy was 1.33%. The overall rate of vaginal delivery following previous caesarean delivery, as reported in literature, varies from 28% to 51%. Landon et al reported an incidence of 28.57% vaginal deliveries.^[9] However, Gonen and colleagues in their study reported 51.22% of patients delivering vaginally.^[10] Chattopadhyay and colleagues reported an incidence of 40% and Pickhardt reported an incidence of 42%.^[7,8] The probable reasons for the low rate of vaginal deliveries in our study were that, about 53.33% of

the patients were taken up for an ERCS and only 40% of the patients who had a trial for VBAC, delivered vaginally.

Out of 28 vaginally delivered cases, forceps were applied in 20 cases and 8 cases delivered simply by giving episiotomy. Allahabadi and colleagues reported use of forceps in 21.30% of their patients.^[11] McGarry reported an incidence of 24.30%.^[12] Graham and colleagues used ventouse assistance in 10.8% of patients in their study.

The incidence of scar rupture in the present series was 1.33% (2 cases) and dehiscence was found in 4 cases during repeat caesarean section.

In the present series out of 40 cases who had got history of previous vaginal delivery 12 (30%) had delivered vaginally and rest 110 cases who had no such history, 16 (14.45%) had delivered vaginally. 50% of patients in the study by Landon et al and 42.20% of the patients with a similar history in the study by Gonen and colleagues.^[9]

In the present study 70% of women with prior successful VBAC ended up in vaginal delivery. Mercer et al in a 4 year observational multicentric study, concluded that an increasing number of prior successful VBACs was associated with a greater probability of VBAC success as well as a lower risk of uterine rupture and perinatal complications in the current pregnancy.^[13]

In the present series 46.67% (70 cases) of cases became pregnant in between 2-4 years and among them rate of vaginal delivery was maximum i.e. 28.57%.

Paul Meier and Richard Porreco studied 207 cases and after adequate trial of labour 84.50% were delivered vaginally resulting in 27.90% decrease in repeat caesarean section rate.

Role of induction and augmentation of labour

In the present series oxytocin was used for augmentation but it was not used for induction of labour. Labour was induced in present series by stripping of membrane and artificial low rupture of membrane. Out of 9 cases in this group 4 delivered vaginally. Out of 12 cases of augmentation by stripping of membrane, ARM and syntocinon drip 10 had delivered vaginally

giving rise to a higher incidence. No case of scar rupture occurred with use of syntocinon in present study. By studying only 12 cases with syntocinon it cannot be declared whether syntocinon in post caesarean pregnancy is safe or not but we have not observed increased morbidity in the failed augmentation group.

Indication of primary caesarean section

In the present series out of 150 cases 30 cases have had their previous section due to cephalopelvic disproportion. Next large group was failure of induction in premature rupture of membrane and postdated pregnancy. This group consisted of total 45 cases. Rest 75 cases was done for other non-recurrent indication like foetal distress, antepartum haemorrhage, pregnancy induced hypertension, eclampsia, diabetes and malpresentation.

Out of 30 cases of cephalopelvic disproportion 28 cases were delivered by repeat caesarean section and rest 3 delivered vaginally.

Indication of repeat caesarean section

In present series repeat section was done in 120 (80.%) cases. Out of 120 cases commonest indication of repeat section was cephalopelvic disproportion. where 30 cases whose indication for primary section was cephalopelvic disproportion. Out of this 30 cases, 28 (93.33%) cases were delivered by repeat section. Other indication of repeat section was foetal distress, failed induction and augmentation, Malpresentation, like Breech and face, Post dated pregnancy, pregnancy induced hypertension, antepartum hemorrhage, eclampsia, DM, bad obstetric history.

In the present study commonest indication of repeat section was cephalopelvic disproportion 28 (93.33%). In Dina Patel's (1982) series cephalopelvic disproportion was also commonest indication.

In the present study maximum successful trial of labour was found in those patient who have had their previous section due to pregnancy induced Hypertension. There was total 9 such cases, out of them 6 (66.67%) had delivered vaginally.

Vaginal delivery

Out of 150 cases in the present series 28 (18.67%) cases had delivered vaginally, 20 cases were delivered by forceps (71.42%) and 8 cases were delivered normally (28.57%). Out of 28 vaginally delivered cases, forceps were applied in 20. Duckering (1946), Riva and Tefch (1961) advocated prophylactic application of forceps in post caesarean cases. Lawrence (1953) in his series of 195 cases, applied forceps in 12.30% of cases.

Placental problem: In the present series placenta praevia was present in 4 cases (2.67%) among 150 cases. Singh et al. (1981) reported a 3.9% incidence of placenta praevia among post caesarean section cases. Taylor (1983) suggested that scar in the lower segment favours low implantation of placenta.

In the present series placenta was located over the previous scar in 4 (3.3%) cases. Adherent placenta was found in one case and in other three cases placenta could be separated easily. The cut uterine margins were bleeding in one case profusely and that could be controlled after putting the 1st layer of uterine stitches rapidly. After giving the 2nd layer hot mops were applied and the bleeding stopped. The other case in which placenta was morbidly adherent it was separated in piecemeal and bleeding was controlled by hot mops after giving the first layer hurriedly. Kistner et al. (1952) reported that pregnant patient with lower uterine caesarean section and placenta praevia was known to be at increased risk for concurrent placenta accreta. This opinion was supported by Read et al. (1980).

Maternal morbidity and mortality

In the present study maternal morbidity was definitely low in vaginally delivered group than repeat section. Incidence of primary post partum haemorrhage 3.57% in comparison with 3.33% in repeat section group, Landon et al reported an increased risk of endometritis and blood transfusion in women undergoing a trial for VBAC than in women undergoing an ERCS. There was no significant difference in overall

maternal morbidity between women who underwent a trial for VBAC (1.60%) and those who had an ERCS (1.03%)

Puerperal pyrexia was more common (10.57%) after repeat section probably due to intrauterine and intraperitoneal manipulation making the mother more susceptible to infection. Urinary tract infection was also more common (4.95%) in repeat section than vaginal (3.70%) delivery group probably due to routine catheterisation in caesarean section and keeping it in situ until the operation was being completed.

There was one case of paralytic ileus and it was managed by suction, Dextrose saline, sedation by narcotic analgesia.

Incidence of retention of urine was no doubt higher in repeat section group due to handling of bladder. There were also 2 cases of Hematuria. In these two cases bladder was grossly adherent with lower segment and sharp dissection had to do to push in down. They later developed hematuria and foley's catheter was kept in situ for 6 days.

Wound gaping occurred in 6 cases of repeat section. Secondary suture had to give in those 6 cases. Breast abscess occurred in 1 case of repeat section and one 1 of vaginal delivery group. In the case of repeat section it had to drain and one rubber tube drain given in the dependent lower part of breast. The other case recovered with antibiotic, analgesic anti-inflammatory drugs and breast support.

In the present series there was no maternal death. Parikh (1964) reported 1.2-1.3% incidence of maternal mortality after repeat section.

Perinatal mortality: Out of total neonatal death 3 died of septicaemia and 2 preterm baby died of diarrhoea. Dewhurst reported foetal mortality rate to be 12.5% among 55 cases of lower segment scar rupture.

In the present series there were total 18 unhealthy scar. There were extreme thinning of lower segment in 14 cases, in 4 cases there were dehiscence and in 2 cases there were demonstrable rupture. The baby of these two ruptured uterus cases were fresh stillborn. It was 100% perinatal

mortality in scar rupture cases in the present series of 150 cases. **Rupture of uterine scar:** In the present series there were 24 cases in who caesarean section was done suspecting threatened scar rupture. Among these 24 cases 20 were in labour and 4 were not in labour. When these 20 cases were sectioned, in 16 cases scar were not healthy and in 4 cases it was healthy. When those 4 cases not in labour were sectioned, in 2 cases scar was not healthy and in 2 cases it was absolutely healthy. One case among those 4 cases sectioned, not in labour, had shown dehiscence during repeat section. Two such cases of dehiscence were found in the group of 20 cases in labour. The incidence of dehiscence in the present series was 2.6%. Scar dehiscence, defined as a disruption of the uterine muscle with intact serosa, was seen in. This is comparable to the incidence quoted by Paul et al, which was 2.35% in their study.

The incidence of scar rupture was 1.33%. The babies were stillborn in two scar rupture cases. Thus foetal mortality rate in cases of scar rupture was 100%. No maternal death occurred in the present series. There was no case of scar rupture or dehiscence after vaginal delivery.

Menon (1962) reported in incidence of 2.3% among lower uterine scars. Jacob and Bhargava (1971) reported an incidence of 0.8%.

Summary and Conclusion

Total number of caesarean section were 1376. Out of this 561 had one or two previous section. 85.33 percent of patients were in the age group of 20-30 years. 92 percent cases were Para 1. Rate of vaginal delivery was maximum among the cases belonged to lower class. Commonest indication of primary section was cephalopelvic disproportion i.e. 20 percent. Failed induction in premature rupture of membrane and Post dated pregnancy consisted of 30 percent of total cases. Abnormal uterine action was also responsible for 13.33 percent of primary sections. Primary section of 63.33 percent cases were done at this hospital. After primary section 40 percent patient suffered

from wound sepsis. 26.67 percent patient suffered from urinary tract infection 20 patients had no morbidity after primary section. 40 percent of patient had puerperal pyrexia after the primary section. Major antenatal complication appeared in 56 cases (37.33%). Among the 150 cases studied 120 (80%) has undergone caesarean section, 28 (18.67%) was delivered vaginally and rest 2 (1.33%) had undergone hysterectomy for rupture lower segment scar. 80 (53.33%) cases were put directly for caesarean section without any trial for vaginal delivery, 70 (46.67%) cases were put for trial of labour. In 42 (60%)cases labour had to be terminated by caesarean section and in rest 28 (40%) vaginal deliveries were possible. 2 (1.33%) cases, admitted with obstructed labour, were taken directly for section and sub-total hysterectomy had to be done for rupture lower uterine segment. Induction of labour was done in 9 cases by stripping of membrane and ARM, 40% delivered vaginally and rest 60% by caesarean section. Augmentation of labour was done by syntocinon drip in 12 cases, 10 cases delivered vaginally and 2 cases caesarean section had to be done. Among the 28 cases delivered vaginally forceps were applied in 20 cases and rest 8 delivered normally with or without episiotomy. Incidence of vaginal delivery was higher among those admitted during labour (21.81%) than those who had been admitted before labour (10%). Incidence of vaginal delivery was higher among those who had got previous history of vaginal delivery (30%) or VBAC(70%) than those who did not have it (14.54%). Incidence of malpresentation in the present series was 5.33%. Major cause of repeat section in the present series was cephalopelvic disproportion(23.33%) followed by threatened scar rupture (20%). Incidence of successful vaginal delivery was maximum (66.67%) among those patient whose primary section was done to pregnancy induced hypertension. Few non-recurrent cause like abnormal uterine action recurred in 35% of cases, malpresentation recurred in 33.33% of cases. Among the cases directly put caesarean section without any trial,

threatened scar rupture topped the list. In the present series it was observed that incidence of caesarean section did not decrease with the increase in height of mother. Incidence of vaginal delivery was maximum (30%) among those babies weighting 2 to 2.5 Kg. Prematurity was the leading cause of neonatal mortality in repeat section. Incidence of placenta praevia was 2.67% in the present series. Incidence of location of placenta over the previous scar was also 2.67%. In one case only placenta was adherent to the lower segment scar. Incidence of unhealthy scar was 75% among those 24 patients terminated by caesarean for threatened scar rupture. Incidence of morbidity was no doubt higher among repeat section group. Puerperal pyrexia was observed 11.67% of repeat section patients. Average stay at hospital in repeat section group was 10 days whereas in case of vaginal delivery it was 4 days. No maternal death occurred in present series. Incidence of ligation among the repeat section group was 58.33% whereas in case of vaginal delivery it was only 21.42%. In 20 cases ligation was done without prior consent of couple as the incision in the lower segment extended laterally and scars were not healthy.

VBAC was better chance for successful in pregnancy. Recurrent and non recurrent cause of primary caesarean section changes the outcome. Due to lesser number of maternal and perinatal mortality, vaginal deliveries have a much safer outcome than repeat sections. The major cause of perinatal mortality in repeat caesarean was prematurity. To avoid this cause of perinatal mortality, we can wait for each and every patient having previous caesarean section for spontaneous labour keeping everything ready for caesarean section. Secondly we can do an ultrasound for detection of maturity in doubtful cases.

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