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An Observational Study on the Clinical Outcome of Cases with Caesarean Section and Vaginal Delivery

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Abstract

Objective: *Our study was to evaluate mode of delivery, foetal and maternal morbidity and mortality in post caesarean section pregnancy and compared the maternal and foetal outcome between caesarean section delivery and vaginal delivery.*

Methodology: *A total of 100 cases of pregnant women with 28 weeks of gestation with or without previous history of single or multiple caesarean section delivery were enrolled. A detail relevant obstetric history, socio economic status, general examination, haemoglobin percentage, maternal condition, foetal conditions were assessed. Progress of labour was monitored minutely during trial of labour. Maternal pulse, BP, uterine activity, scar tenderness and foetal heart sound were recorded every ½ an hour, during 1st stage of labour. The progress of labour was assessed by dilatation of Cervix, and descent of presenting part at an interval of 3 hours. Elective caesarean section was done to those cases where patients were not allowed for labour or contraindicated for vaginal delivery. Condition of baby was assessed by apgar score at 1 min. and 5 minutes.*

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

Conclusions: *Our study was to conclude that the majority of cases were undergone to caesarean section delivery. Commonest cause of caesarean section was cephalopelvic disproportion. Vaginal delivery was more common in cases with low socioeconomic status. Incidence of vaginal delivery was more in condition of pregnancy induced hypertension and babies with high birth weight, majority of cases were delivered by use of forecep.*

Keywords: *caesarean section, vaginal delivery, clinical outcome.*

Introduction

A Cesarean section (C-section) is surgery to deliver a baby. It is a surgical technique involved to deliver one or more babies when women happened to face unexpected problems during delivery. Most common problems faced by women include Position of the baby, Signs of Distress in the baby or if any health problems faced by the mother. This increase has grown concern among many countries, although, a necessary or a desirable procedure but still Caesarean births may also be medically

unnecessary[1]. The survey conducted by World Health Organization[2] between 2004 and 2008 in which 24 countries from the region of Latin America, Africa and Asia participated has reported in 2010, that, in 23 countries rate of Caesarean deliveries without medical indication ranged between 0.01% and 2.10%, whereas, in China it shoots up to 11.6%. On the other hand, this rise has shown an increased hospital based deliveries and access to hospital care which has been saving lives for a long period of time. It has been argued that decreasing Caesarean deliveries would have a detrimental effect on mothers and infants' health and patient's choice should be considered[3]. Though, estimates of Caesarean Sections rates in India is 7.1% in the year 1998 but 16.7% change in rates is observed annually in India which is one of highest among the countries of South East Asia region[4]. Various studies have shown that constraint of data has masked actual rates.

Caesarean section have an increased risk of intraoperative complications (18%), excess blood loss (9%), blood transfusions (1%), febrile morbidity (20%), wound infection (6%), urinary tract infection (6%), neonatal respiratory morbidity (3%), and other critical situations like venous thromboembolism[5,6]. This surgical procedure is effective in saving maternal and infant lives but only when they are required for adequate medical reasons[7]. Vaginal deliveries performed with safe practice of forceps and vacuum extraction techniques may help diminish the increased CS rates.

Aims of Our study was to evaluate the foetal and maternal morbidity and mortality in post caesarean section pregnancy. Also evaluated the mode of delivery and compared the maternal and foetal outcome between caesarean section delivery and vaginal delivery.

Materials and Methods

A total of 100 cases of pregnancy were enrolled in this study. The entire subjects/attendants signed an informed consent approved by institutional ethical committee of Mata Gujri Memorial Medical College and Lions Seva Kendra Hospital, Kishanganj, Bihar, India was sought. Data was collected on the basis of inclusion and exclusion criteria, in OPD or the ward, of department of Obsterics and Gynaecology, Mata Gujri Memorial Medical College and Lions Seva Kendra Hospital, Kishanganj, Bihar, during period of December 2016 to March 2017.

Methods

Pregnant woman carrying more than 28 weeks of gestation with or without previous history of single or multiple caesarean section delivery were considered. We were excluded the cases with scars in the uterus due to other cause like myomectomy or hysterotomy.

A detail relevant history, clinical examinations and investigations were performed to all cases.

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 hour, during 1st stage of labour. The progress of labour was assessed by dilatation of Cervix, and descent of presenting part at an interval of 3 hours.

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.

If any type of complication or abnormality was detected during the course of labour. Trail of vaginal delivery was stopped and patients were allowed for caesarean section.

Forceps was used routinely in almost all cases. Liberal episiotomy was being made in almost all cases. After vaginal delivery the patient was observed clinically for 2- 3 hours. Lower uterine segment was explored whenever necessary.

Elective caesarean section was done to those cases where patients were not allowed for labour or contraindicated for vaginal delivery. At the time of caesarean section, all the cases were examined 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 hemorrhage and bladder injury. Natures 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.

Results and Observations

This study was conducted in department of Obstetrics and Gynaecology, Mata Gujri Memorial Medical College and Lions Seva Kendra Hospital, Kishanganj, Bihar, India. We were taken a total of 100 cases of pregnancy with age group ≥20 years to 35 years.

7(7%) cases were in age group of ≥20 years. 51(51%) cases were in age group of 21-25 years. 32(32%) cases were in age group of 26-30 years. 10(10%) cases were in age group of 31-35 years. We were seen that majority of cases belonged to age group of 21-25 years.

In this study, majority of cases 64(64%) had parity I. 24(24%) had para II and 12(12%) had para III.

In our study, majority of cases 58(58%) were belonged to lower socioeconomic status. 40(40%) cases were in middle socioeconomic status and only 2(2%) were belonged to higher socioeconomic classes.

In this study, major indication of primary caesarean section was cephalopelvic - disproportion 21(21%). And rest indications were foetal distress 12(12%), failed induction 15(15%), malpresentation 8(8%), failed induction in post-dated 13(13%), placenta praevia 4(4%), accidental hemorrhage 2(2%), pregnancy induced hypertension 6(6%), diabetes mellitus 1(1%), eclampsia 1(1%), bad obstetric history 4(4%), intra uterine growth retardation 1(1%) and abnormal uterine action 12(12%).

In this study, patients with post operative morbidity in primary caesarean section were 27(27%) urinary tract infection, 19(19%) thrombophlebitits, 40(40%) wound sepsis, 1(1%) evidence of peritonitis. And 13(13%) patients were no morbidity.

History of Puerperal Pyrexia was present in some cases after the primary caesarean section and temperature reached upto 100. 4° F or above within 14 days of child birth. 38(38%) cases had puerperal pyrexia and 62 (62%) cases were afebrile.

In this study, out of 100 cases 43 cases were showed complications. Cases with complication were 16(16%) doubtful scar weakness, 7(7%) malpresentation, 13(13%) anaemia, 3(3%) pregnancy induced hypertension and 2(2%) antepartum haemorrhage.

Out of 100 cases, 80(80%) were booked cases, of which 65(81.25%) were delivered by Caesarean section and rest 15(18.75%) per vaginum. Total perinatal mortality in the booked group was 5(6.25%). One subtotal hysterectomy had to be done due to rupture of lower segment.

Out of 100 cases, 20 cases were unbooked of which 16 (80%) cases were delivered by Caesarean section and rest 4 (25%) per vaginum. Perinatal mortality was 2 (10%) 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 was 78(78%) out of 100 cases. Rest were delivered via

naturalis 20(20%). Hysterectomy was done in 2(2%) cases due to rupture of previous scar.

When labour was induced by stripping of membrane and ARM, 3 cases out of 7 delivered vaginally and rest 4 underwent caesarean section. Syntocinon drip combined with them, for augmentation, outcome was better, 8 cases out of 10 were delivered vaginally and 3 cases were under caesarean section.

Out of 20 cases of vaginal delivery in post caesarean, 5 (25%) were delivered by normal delivery with or without episiotomy. And 15(75%) were delivered by forceps delivery. We were seen that incidence of forceps delivery was more than normal delivery.

In this study, cases who had gotten delivery after interval of 1-2 years were 21(21%). Among 21% cases, 2(9.52%) were delivered by vaginally and rest delivered by caesarean section. 45(45%) cases were delivered after interval of 2-4 years. Among 45% cases, 14(31.11%) cases were delivered by vaginally. 34(34%) cases were delivered after 4+ years. Among 34% cases, 4(11.76%) cases were delivered by vaginally and rest were delivered by caesarean section.

In this study, before labour, 33 cases were allowed for caesarean section and 2 cases were allowed for vaginal delivery. During labour there were need of caesarean section of 45 cases and 18 cases were delivered normally by vaginal. And 2 cases of obstructed delivery were admitted during labour with scar rupture so that hysterectomy was done.

Table.1. Mode of delivery.

History of previous vaginal delivery	No. of cases	Percentage (%)				
			Caesarean Section	Percentage (%)	Vaginal Delivery	Percentage (%)
Present	27	27	19	70.37 (Out of 27)	8	29.62 (Out of 27)
Absent	73	73	61	83.56 (Out of 73)	12	16.43 (Out of 73)

Table shows out of 100 cases, 27 cases had got previous history of vaginal delivery and 8 out of 27 cases were delivered vaginally. This rate was higher (29.62%) than the group with no history of vaginal delivery.

In this study, cases with previous vaginal delivery: 8 cases were undergone prior successful VBAC. Among them 3(37.5%) were delivered by caesarean section and 5(62.5%) were delivered by vaginally. 25 cases were no need of prior successful VBAC. Among them 21(84%) were caesarean section and 4(16%) were delivered by vaginally. We seen that cases with previous vaginal birth, majority of patients (62.5%) were prior successful VBAC vaginal delivered.

Table.2. Presentation in post caesarean cases

Presentation	No. of cases	Percentage
Vertex	90	90
Breech	8	8
Face	2	2

In this study we were seen in presentation of post caesarean cases, that was 90(90%) cases were vertex presentation, 8(8%) breech presentation and 2(2%) face.

In this study, major cause of repeat caesarean section was Cephalopelvic disproportion18 (23.07%), second major cause was threatened scar rupture 16(20.51%), rest were Foetal distress 7(8.97%), Failed Induction and augmentation 5(6.41%), malpresentation 6(7.69%), post dated pregnancy 4(5.12%), placenta praevia 2(2.56%), Previous two caesarean section 4(5.12%), Bad Obstetric History 3(3.84%), Pregnancy Induced Hypertension 3(3.84%), Diabetes Mellitus 22.56%), Inco- ordinate uterine action 2(2.56%) and Premature rupture of membrane 6(7.69%).

Table.3. Indication of Present caesarean section and mode of present delivery.

Previous Indication	No. of cases	Mode of present delivery				
		Vaginal Delivery	Percen-tage	Caesarean Section	Percen-tage	Hys-terec-tomy
Cephalopelvic disproportion.	25	2	8	23	92	-
Foetal distress	8	2	25	6	75	-
Failed Induction in premature rupture of membrane	16	4	25	13	81.25	-
Malpresentation	7	1	14.28	6	85.71	-
Failed induction in post- dated pregnancy.	14	4	28.57	10	71.42	-
Placenta Praevia	3	1	33.33	2	66.66	-
Accidental Haemorrhage	2	0	-	1	50	-
Pregnancy Induced Hypertension	6	4	66.66	2	33.33	1
Diabetes Mellitus	2	0	-	2	100.00	-
Eclampsia	2	0	-	2	100.00	-
Bad Obstetric History	3	0	-	3	100.00	-
Intrauterine growth retardation	1	0	-	1	100.00	-
Abnormal Uterine Action	11	2	18.18	9	81.81	1

In this study, commonest indication of primary caesarean section was cephalopelvic disproportion 23(92%) out of 25 cases and rest were malpresentation 6(85.71%) out of 7, failed induction in premature rupture of membrane 13(81.25%) out of 16, failed induction in post-dated pregnancy 10(71.42%), Placenta Praevia 2(66.66%) out of 3, pregnancy induced hypertension 2(33.33%) out of 6, Accidental Haemorrhage 1(50%) out of 2, diabetes mellitus 2(100%), eclampsia 2(100%), bad obstetric history 3(100%), intrauterine growth retardation 1(100%), abnormal uterine action 9(81.81%) out of 11.

Major indication of vaginal delivery was cases with pregnancy induced hypertension 4(66.66%) out of 6.

In this study 3(3%) cases were height with 4(4%) feet to 4.6 feet, 58(58%) cases were height with 4.7 feet to 5 feet and 39 cases were height with 5.1 to 6.3 feet. Findings of our study shown that height was not a major factor for obstetrics future.

Table.4. Mode of Delivery in relation to weight of baby

Birth Weight	No. of cases	Mode of Delivery				Hys-terec-tomy
		Caesarean Section	Percen-tage	Vaginal Delivery	Percen-tage	
Less than 1500 Gm.	2	2	100	0	-	-
1. 5 to 2. 00 Kg.	7	5	71.43	4	28.57	-
2. 01 to 2.50 Kg.	35	24	68.57	15	30.00	-
2.51 to 3.00 Kg.	37	31	83.78	9	17.31	1
3.-01 to 3.50 Kg	19	18	94.73	-		1

In this study, we were seen that 2(100%) babies with weight less than 1500 grams were delivered by caesarean section. 7 babies were with weight 1.5 to 2.00 kilograms, among them 5(71.43%) were delivered by caesarean section and 4(28.57%) were vaginally delivered. 35 babies were with weight 2.10 to 2.50 kilograms, among them 24(68.57%) were delivered by caesarean section and 15(30%) were vaginally delivered. 37 babies were with weight 2.51 – 3.00 kilograms, among them 31(83.78%) were delivered by caesarean section, 9(17.31%) were vaginally delivered and one undergone hysterectomy. 19 babies were with 3.01-3.50 kilograms, among them 18(94.73%) were delivered by caesarean section and one was undergone hysterectomy.

Table.5. Incidence of Still Born and Neonatal Mortality

Type of Delivery	No. of cases	Still Born		Neonatal Death	
		No. of cases	Percentage	No. of cases	Percentage
Repeat Section	80	3	3.75	2	2.5
Vaginal Delivery	20	2	10	1	5

In this present study, 80(80%) cases were undergone repeat section, among them 3(3.75%) were still birth and 2(2.5%) were neonatal death. 20(20%) cases were delivered vaginally, among them 2(10%) were still birth and 1(5%) cases were neonatal death. Rate of neonatal death was higher in cases with vaginally delivered.

In this study, total case of placenta parevia was 2(2%). Among them one case was type I & II placenta praevia and other case was type III & type IV placenta praevia. 2(2%) cases were placenta located over previous caesarean scar, among them one case was adherent placenta and other case was not-adherent placenta.

In this study, total 18(18%) cases were scar tenderness, among them 13(72.22%) cases were scar unhealthy.

Table.6. Rupture of previous Scar

Outcome of Pregnancy	No. of cases	Scar rupture or dehiscence	Percentage
Repeat Section	78	2	2.56
Vaginal Delivery	20	-	-
Hysterectomy	2	2	
	100	4	

In the present study, out of 100 cases, 4(4%) cases were dehiscence or scar rupture. In the cases of (78) repeat caesarean section, 2(2.56%) cases were scar rupture or dehiscence. The two cases were rupture scar. Both of them underwent hysterectomies and babies were stillborn.

Table.7. Complications after delivery.

Complication	Vaginal Delivery (Total 20)	Percen-Tage	Repeat caesarean section (78)	Percen-Tage
1. Post Partum Haemorrhage.				
i) Primary	1	5	2	2.56
ii) Secondary	0	-	1	1.28
2. Puerperal Pyrexia	0	-	10	12.82
3. Urinary tract infection	1	5	4	5.12
4. Thrombophlebitis	-	-	2	2.56
5. Paralytic Illius	-	-	1	1.28
6. Wound Gaping	-	-	4	5.12
7. Retention of urine	-	-	2	2.56
8. Hematuria	-	-	1	1.28
9. Breast abscess	1	5	1	1.28
	3		28	

In this present study, complication of repeat caesarean section of cases were primary post partum haemmorrhage 2(2.56%), secondary post partum haemmorrhage 1(1.28%), puerperal pyrexia 10(12.82%), urinary tract infection 4(5.12%), thrombophlebitis 2(2.56%), paralytic illius 1(1.28%), wound gaping 4(5.12%), retention of urine 2(2.56%), hematuria 1(1.28%) and breast abscess 1(1.28%). That was major complication of repeat caesarean section was puerperal pyrexia. Similarly, complication of vaginal delivery of patients were primary post partum hemorrhage 1(5%), urinary tract infection 1(5%) and breast abscess 1(5%). Hence we were seen that complication was commonly found in cases with repeat caesarean section.

In the 78 cases with repeat caesarean section, tubectomy was done in 46(58.97%) cases. In out of 20 vaginally delivered cases, tubectomy was done in 4(20%) cases. Hence we seen that rate of tubectomy was higher in repeat caesarean cases.

Present study shown that average hospital stay of cases with repeat section was 14 days, and cases with vaginally delivered was 4 days. And, there was no maternal death.

Discussion

Good maternal and perinatal outcomes can be ensured through essential obstetric and newborn care provided by skilled attendants during pregnancy and childbirth[8,9]. In many resource-poor settings, access to skilled care and crucial interventions is limited. Cesarean delivery is a marker for the availability and use of obstetric services in these situations[10]. Although usually lifesaving, cesarean delivery increases maternal and newborn risks[11,12] and costs[13]. Ill health related to poor socioeconomic and nutritional status is worsened by other co-morbidities. Delays in seeking, accessing, and receiving quality care in facilities also contribute to lower cesarean delivery rates and increase risks of adverse outcomes.

In this present study, 51(51%) cases were in age group of 21-25 years. 32(32%) cases were in age group of 26-30 years. Findings of our study shown that majority of cases were in age group of 21-25 years.

Louise C. Kenny etal.(2013) [14] was conducted a study consisted of 215,344 births; 122,307 mothers and said that (54.19%) were aged 20–29 years, 62,371(27.63%) were aged 30–34 years, 33,966(15.05%) were aged 35–39 years and 7,066(3.13%) were aged ≥40 years.

In our study, majority of cases 58(58%) were belonged to lower socioeconomic status. 40(40%) cases were in middle socioeconomic status and only 2(2%) were belonged to higher socioeconomic classes. Incidence of vaginal delivery was maximum in lower socioeconomic classes and caesarean section was higher in higher socioeconomic status.

Due to malnutrition anaemia and lack of rest among the lower class group baby weight became less and also at the same time there was onset of premature labour, which increase the probability of vaginal delivery. They also perform their daily household work upto term which helped in the engagement of head. In addition to that they were quite ignorant about the consequence of labour that is why they were less apprehensive which helped to establish, good uterine contraction and less abnormal uterine action in this group. Lastly most of them were admitted when they were active labour which also increased the probability of vaginal delivery.

Sheuly Begum et al. (2013)[15] reported that vaginal delivery was higher in cases with lower socioeconomic status, and caesarean section delivery was higher in with higher socioeconomic status cases.

In this study, major indication of primary caesarean section was cephalopelvic –disproportion 21(21%). And rest indications were foetal distress 12(12%), failed induction 15(15%), malpresentation 8(8%), failed induction in post-dated 13(13%), placenta praevia 4(4%), accidental haemorrhage 2(2%), pregnancy induced hypertension 6(6%), diabetes mellitus 1(1%), eclampsia 1(1%), bad obstetric history 4(4%), intra uterine growth retardation 1(1%) and abnormal uterine action 12(12%).

In this study, patients with post operative morbidity in primary caesarean section were 27(27%) urinary tract infection, 19(19%) thrombophlebitits, 40(40%) wound sepsis, 1 (1%) evidence of peritonitis. And 13(13%) patients were no morbidity.

History of Puerperal Pyrexia was present in some cases after the primary caesarean section and temperature reached upto 100. 4° F or above within 14 days of child birth. 38(38%) cases had puerperal pyrexia and 62 (62%) cases were afebrile.

Shah A, et al. (2009) [16] reported that Cesarean deliveries were performed mostly for cephalopelvic disproportion, dystocia, or failure to progress (median 30.9%); fetal distress (median 25%); previous cesarean (median 21.5%); and malpresentations (median 13.5%) Laparotomy for uterine rupture was uncommon (median 0.08%).

Federation of Obstetrical and Gynaecological Societies of India (FOGSI) reported perinatal morality rate 66.30/1000 total births for 1977-79. Menon reported a perinatal mortality rate 70/1000 in 1963 and in 1982 it was 83.8/1000. It clearly shows that perinatal mortality has not improved inspite of rise in repeat caesarean section rate. In the United States, ERCS results in around half a billion dollars in cost to the tax payer every year. A review of literature suggests that it does not affect any decrease in fetal or maternal mortality and instead further increases costs borne out of increased hospital stay and maternal morbidity. [17,18]

In this study, out of 100 cases, 80(80%) were booked cases, of which 65(81.25%) were delivered by Caesarean section and rest 15(18.75%) per vaginum. Total perinatal mortality in the booked group was 5(6.25%). One subtotal hysterectomy had to be done due to rupture of lower segment.

Out of 100 cases, 20 cases were unbooked of which 16 (80%) cases were delivered by caesarean section and rest 4 (25%) per vaginum. Perinatal mortality was 2 (10%) quite higher than the booked group. One subtotal hysterectomy was done due to rupture of previous lower segment scar.

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.

In our study, cases with complication were 16 (16%) doubtful scar weaknesses, 7(7%) malpres-entation, 13(13%) anaemia, 3(3%) pregnancy induced hypertension and 2(2%) antepartum haemorrhage.

In present study, out of 100 cases, 27 cases had got previous history of vaginal delivery and 8 out of 27 cases were delivered vaginally. This rate was higher (29.62%) than the group with no history of vaginal delivery. Cases with previous vaginal delivery: 8 cases were undergone prior successful VBAC. Among them 3(37.5%) were delivered by caesarean section and 5(62.5%) were delivered by vaginally. 25 cases were no need of prior successful VBAC. Among them 21(84%) were caesarean section and 4(16%) were delivered by vaginally. We seen that cases with previous vaginal birth, majority of patients (62.5%) were prior successful VBAC vaginal delivered.

In contrast to this study 50% of patients in study conducted by Landon et al(2004)[23] and 42.20% of patient by Gonen and colleagues(2006) where 90% of patients had prior vaginal delivery.[19] This indicated that women with previous vaginal delivery had better chance for successful VBAC. In this study 70% of cases had prior successful VBAC. Landon et also concluded that women with prior vaginal delivery or prior VBAC are more likely to undergo trial for VBAC with good rate of success. Lavin et al (1982), Martin et al (1983) reported that previous vaginal birth improved the prognosis of successful vaginal delivery. Jarrell et al (1985) reported same type of finding. Silver and Gibbs (1987) reported 85.7% of patients with history of previous vaginal delivery were delivered vaginally in comparison to only 56% successful vaginal delivery among patients with no history of previous vaginal birth.

In this study, major cause of repeat caesarean section was Cephalopelvic disproportion18 (23.07%), second major cause was threatened scar rupture 16(20.51%), rest were Foetal distress 7(8.97%), Failed Induction and augmentation 5(6.41%), malpresentation 6(7.69%), post dated pregnancy 4(5.12%), placenta praevia 2(2.56%), Previous two caesarean section 4(5.12%), Bad Obstetric History 3(3.84%), Pregnancy Induced Hypertension 3(3.84%), Diabetes Mellitus 22.56%), Inco- ordinate uterine action 2(2.56%) and Premature rupture of membrane 6(7.69%).

In the series of Riva and Teich (1961) 49 out of 83 cases delivered vaginally subsequent to caesarean section done for cephalopelvic disproportion and all babies weighed more than the babies delivered by initial section. So the statement made by Rice (1972) and Lynch (1941) no longer holds good who advocated that the primary section done for recurrent indication like cephalopelvic disproportion then all the subsequent pregnancy should be terminated by caesarean section. On the contrary, Here (1949) reported 49% vaginal delivery in these cases by proper trial of labour. This raises the doubt about cephalopelvic disproportion. Diagnosis by X-ray Pelvimetry and Ultrasonography will be helpful in these cases

Jarrell et al (1985) reported 75% vaginal delivery who had their previous section due to foetal distress. Benedetti et al (1982) reported 82% vaginal delivery in non- repeating group. The incidence is comparatively less in the present group than the previous worker.

Greenhill (1955) stated "I now almost routinely perform caesarean section regardless of the indication of the first operation". The supporters of the view "once a caesarean section always caesarean section" are of opinion that they are not going to take slightest risk of scar rupture in post caesarean section pregnancy. Moreover they were of opinion that there is no credit in performing a vaginal delivery in previously sectioned pregnancy when always there is risk of scar rupture.

The criteria for selection of patient for trial of vaginal delivery were previously known lower uterine caesarean section without any extension. Non-recurring indication, only one previous section vertex presentation and lastly adequate pelvis. The risk of vaginal delivery is scar rupture. That is why the dictum "once caesarean section always hospital delivery and needs individual evaluation" has come to this field. One must individualize all cases for trial in respect to their indication of primary section, any obstetric problem in present pregnancy and clinical assessment of strength of scar. Good uterine contraction early engagement of Head, Good amount of liquor, progressive dilatation, effacement and descent of Head and absence of scar tenderness are all favourable factors indicating successful vaginal delivery. Constant monitoring of foetal heart sound and maternal progress of labour is mandatory. Labour should be terminated by caesarean section in case of foetal distress where conditions for vaginal delivery are not satisfactory. If the patient is in the second stage of labour then labour should be terminated by application of forceps. During trial one must be vigilant about vaginal bleeding – slight among vaginal bleeding may be the earliest sign of scar rupture and labour should be better terminated by caesarean section. While during strict observation of the patient in trial of such cases one must always keep his mind about the occurrence of sudden silent abdomen i.e. sudden disappearance of labour pain, usual absence of foetal heart sound in most of the cases, nonprogression of labour and sudden relief of patient from agonizing labour pain which may be followed by vaginal bleeding tachycardia and features of shock depending on amount of intra-abdominal bleeding and neurogenic response. Immediate laparotomy should be performed for further management. Uterine contraction was weak at times. In those cases gradual infusion of oxytocin drip was useful. But one must be critically vigilant during infusion of oxytocin drip in post caesarean section cases. Second stage should always be curtailed by application of forceps. Labour should not be allowed to continue more than 8 to 10 hours from its onset. Uterine cavity should not be explored routinely in all cases. All the cases of successful vaginal delivery should be observed for a couple of hours after the delivery. Maternal vital signs should be monitored and lower segment should be palpated gently per vagina. In the presence of any extra bleeding per vagina and deterioration of maternal vital signs, uterine cavity should be explored immediately. But according to Hindman (1948), Wilson (1951) and Baker (1955) the uterus should be explored manually to verify the

integrity of scar. Donald (1974) also advocated same opinion. However, no untoward result occurred in the present series without routine exploration.

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. No untoward effects were noted in Brown & McGrath's (1965) series of 205 cases after use of oxytocics. Mudaliar and Menon (1978) were not against the use of oxytocin in those patients whose vertex was engaged and uterine action was weak after the rupture of membrane. According to Harris (1953) Oxytocies can be used whenever it is necessary with precautions.

Hindman (1948) advised against the use of oxytocics. McGarry (1969), Meehan et al. (1972) advocated that syntocinon can be used safely without risk. Jarrell et al. (1985) criticized use of oxytocin in post caesarean section cases. Lavin et al. (1982) concluded that oxytocin use might increase the incidence of scar rupture. Beneditt et al. (1982) showed dehiscence of scar in three cases with the use of oxytocin.

In this study we were seen that majority of cases were 90(90%) vertex presentation.

In this study, major cause of repeat caesarean section was Cephalopelvic disproportion18 (23.07%), second major cause was threatened scar rupture 16(20.51%), rest were Foetal distress 7(8.97%), failed Induction and augmentation 5(6.41%), malpresentation 6(7.69%) and others.

In this study, commonest indication of primary caesarean section was diabetes mellitus 2(100%), eclampsia 2(100%), bad obstetric history 3(100%), intrauterine growth retardation 1(100%), abnormal uterine action 9(81.81%) out of 11, cephalopelvic disproportion 23(92%) out of 25 cases and rest were malpresentation 6(85.71%) out of 7, failed induction in premature rupture of membrane 13(81.25%) out of 16, failed induction in post- dated pregnancy 10(71.42%), Placenta Praevia 2(66.66%) out of 3, and others. Major indication of vaginal delivery was pregnancy induced hypertension 4(66.66%) out of 6.

In this study, majority of cases 58(58%) were height with 4.7 feet to 5 feet that height was not a major factor for obstetrics future.

Findings of our study shown that low birth weight babies were delivered by caesarean section.

In this present study, we were seen that majority of cases 80(80%) cases were undergone repeat section and neonatal death was 2.5%. But rate of neonatal death (5%) was higher in cases undergone vaginally delivered.

Allahabadia and colleagues reported use of forceps in 21.30% of their patients. McGarry reported an incidence of 24.30%. Graham and colleagues used ventouse assistance in 10.8% of patients in their study and Kala et al reported 12.10% ventouse assisted deliveries in their study.[20.21] High incidence of assisted vaginal delivery was due to the fact that forceps were used prophylacticaly to cut short the second stage of labour.

In this study, total case of placenta parevia was 2(2%). Total 18(18%) cases were scar tenderness, among them 13(72.22%) cases were scar unhealthy.

In the present study, out of 100 cases, 4(4%) cases were dehiscence or scar rupture. In the cases of (78) repeat caesarean section, 2(2.56%) cases were scar rupture or dehiscence. The two cases were rupture scar. Both of them underwent hysterectomies and babies were stillborn.

In this present study, major complication of repeat caesarean section was puerperal pyrexia 10(12.82%), rest were primary post partum hemorrhage 2(2.56%), secondary post partum hemorrhage 1(1.28%), urinary tract infection 4(5.12%), thrombophlebitis 2(2.56%), paralytic illius 1(1.28%), wound gaping 4(5.12%), retention of urine 2(2.56%), hematuria 1(1.28%) and breast abscess 1(1.28%).

Current recommendations of the RCOG and ACOG include offering the option of a planned VBAC to women with a prior history of one uncomplicated LSCS in an otherwise

uncomplicated pregnancy at term, with no contraindication to vaginal birth.[22,23] Stress has been laid on proper antenatal counseling regarding the benefits and risks associated with a planned VBAC. A final decision for mode of birth must be agreed upon before the expected date of delivery (ideally at 36 weeks of gestation). VBAC should always be attempted in institutions well equipped to respond to emergencies, with an OT facility and adequate trained personnel to provide emergency care.[24] In the absence of large scale RCTs comparing trial for VBAC and ERCS, there is a large scope for future research in 'birth after previous caesarean birth' and priorities have to be identified in this respect. A simple and pragmatic method or scoring system for quantifying the risk of emergency caesarean delivery and uterine rupture during attempted VBAC will help identify women at high risk for an unsuccessful VBAC and would thus help decision making considerably. Long term maternal and infant outcomes between planned VBAC and ERCS, such as subfertility, depression, pelvic floor dysfunction, incontinence and neurodevelop-mental disorders need to be studied.

In our study, repeat caesarean section cases, tubectomy was done in 46(58.97%) cases. In vaginally delivered cases, tubectomy was done in 4(20%) cases. Hence we seen that rate of tubectomy was higher in repeat caesarean cases. And in this study there was no maternal death. Average hospital stay of cases with repeat section was 14 days, and vaginally delivered case was 4 days.

Future Research

Science is dynamic and there is always a scope of improvement and change in time to come ahead. With progressive aim to move ahead we aspire to achieve highly accurate and reliable results. Thus every study leaves back scopes for other researcher to do something more advanced and varied in order to touch the height of perfection. This study examined only 100 subjects, future researchers can expand the study by including more number of subjects so as to make generalization of the results and practice, further studies with a larger sample size and in multiple centers are required. Thus it could be applied to real life situation.

Conclusions

Our study was to conclude that the majority of cases were undergone to caesarean section delivery. Vaginal delivery was more common in cases with low socioeconomic status. Incidence of vaginal delivery was more in condition of pregnancy induced hypertension and babies with high birth weight. In vaginal delivery, majority of cases were delivered by forecep delivery. Commonest cause of caesarean section was cephalopelvic disproportion. Booked cases were more prone to caesarean section delivery. Prematurity of babies or low birth weight was major cause of neonatal mortality. Vertex presentation was more common. Commonest complication of caesarean section was Puerperal pyrexia. Tubectomy was mainly seen in caesarean section delivery.

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