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RESEARCH ARTICLE

INTRA-OPERATIVE DIFFICULTIES ENCOUNTERED IN REPEAT CESAREAN DELIVERIES – AN OBSERVATIONAL PROSPECTIVE STUDY

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ABSTRACT

Objective: To find out the type and frequency of intra-operative difficulties encountered in patients with repeat cesarean deliveries.

Study Design: An observational prospective study.

Place And Duration: Department of Obstetrics and Gynaecology, Lady Goschen Hospital, Mangalore. The study period was from May 2014 to July 2015.

Method: Pregnant women admitted in Department of Obstetrics & Gynaecology at Lady Goschen hospital through outpatient department or emergency from May 2014 to July 2015 with the history of previous cesarean and underwent repeat cesarean were included. They were divided into two group, women with previous one cesarean and another with previous 2 or more cesareans. Intra-operative difficulties noted in terms of dense adhesion, thinned out lower uterine segment, scar dehiscence, scar rupture, placenta praevia, adherent placenta, bladder injuries etc.

Results: During the study period, 600 pregnant women with repeat cesarean were studied of which 536 had previous 1 cesarean & 64 with 2 or more previous cesarean. The frequency of dense adhesion, thinned out lower uterine segment, scar dehiscence, uterine rupture, placenta praevia, adherent placenta, bladder injury were 24.2%(130), 22.3%(120), 1.8%(10), 1.1%(6), 6.7%(36), 8%(16), 2.2%(12) respectively in patients with previous one cesarean and 50%(32), 40.6%(26), 3.3%(2), 3.1%(2), 12.5%(8), 31.2%(20) & 9.3%(20) respectively in 2 or more previous cesareans.

Conclusion: Intra-operative difficulties in repeat cesarean patients increase with increase in number of prior cesarean. The frequency of thinned out lower uterine segment and scar dehiscence is more when inter pregnancy interval is less than 18 months.

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INTRODUCTION

Before the 19th century, prior to the development of safe cesarean operations, virtually all deliveries were vaginal. The focus of the accoucheur was on maternal survival, and limited concern was given to the fetus – result being an extremely high rate of fetal morbidity and mortality. ⁽¹⁾

In the last few decades, the incidence of cesarean delivery has increased due to advances in fetal monitoring, increase in cesarean for previous cesarean scar, increasing patient and physician preference for operative intervention in breech presentation, good NICU facilities, greater faith has been reposed in cesarean for preterm and IUGR babies to avoid potential intra partum complications. ⁽²⁾

E. B. Craigin's dictum "once a cesarean always a cesarean" was issued in an era dominated by classical operation in an article entitled "conservatism in obstetrics". Yet today repeat cesarean account for 30-48% of all cesarean births. ⁽³⁾

There must be a conscious serious appraisal of the significance of undertaking the first cesarean because of the possibility of repeat procedure. The contribution of repeat cesarean to the overall cesarean deliveries is increased by more than one-fourth from 1996 to 2003, from 69.8 to 88.7 per 100 births to low-risk women with previous cesarean. ⁽⁴⁾

The increasing trend of elective repeat cesarean has increased; emphasis should be made on the complications that are encountered while performing the cesarean which causes increased maternal morbidity and mortality. There is no significant reduction in fetal mortality. ⁽⁵⁾

Moreover the previous studies show that the complication rate increases with increase in number of previous cesarean. ⁽⁶⁾ This study is undertaken as no adequate data was available regarding the complications of repeat cesarean in a tertiary hospital in South Karnataka.

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MATERIALS AND METHOD

Study Design: This was an observational prospective study

Study Setting: This study was conducted in the Department of Obstetrics & Gynecology at Lady Goschen hospital, Mangalore.

Study Duration: The study was conducted from May 2014 to July 2015

Sample Size: Pregnant women admitted in Department of Obstetrics & Gynecology at Lady Goschen hospital through outpatient department or emergency from May 2014 to July 2015 with the history of previous cesarean (1 or more) and underwent repeat cesarean delivery were included.

Statistical Analysis: done by Chi square test and SPSS version 17.0

Exclusion Criteria

- Those patients who had previous myomectomy
- Those who had history of PID, laparotomy done for ovarian mass, ectopic pregnancy
- Those with bleeding disorders, anemia

METHOD

Pregnant women in the study were divided into two groups depending on number of previous cesareans as those with previous one cesarean and those with two or more cesareans. The existing method of performing cesarean delivery was unaffected by the study. The surgeons were requested to note in particular the difficulties they encounter while operating on cases of previous cesarean in terms of

- Dense adhesions – where adhesiolysis was required⁽⁷⁾
- Thinned out lower uterine segment – where subjective intra-operative assessment of thickness of lower uterine segment is less than 2.5mm.⁽⁸⁾
- Scar dehiscence – incomplete separation of uterine scar with intact peritoneum and fetal membranes.⁽⁹⁾
- Scar rupture – complete separation of the old uterine incision throughout most of its length with rupture of fetal membranes.⁽¹⁰⁾
- Placenta praevia – encroachment of placenta onto the lower uterine segment.
- Adherent placenta - Morbidly adherent placenta, which describes placenta accreta, increta, and percreta, implies an abnormal implantation of the placenta into the uterine wall.⁽¹¹⁾
- Bladder injury – where the bladder was sutured intra-op and indwelling catheter for at least 1 week.

RESULTS

Number of patients who had repeat cesarean during the study period was 600. Of these 536 were of group 1 and 64 were of

group 2. Among them elective and emergency cesareans were 312 and 288 respectively. The frequency of dense adhesions, thinned out lower uterine segment, scar dehiscence, uterine rupture, placenta praevia, adherent placenta, bladder injury were 24.2% (130), 22.3% (120), 1.8% (10), 1.1% (6), 6.7% (36), 8% (16), 2.2% (12) respectively in patients with previous one cesarean delivery and 50% (32), 40.6% (26), 3.3% (2), 3.1% (2), 12.5% (8), 31.2% (20) & 9.3% (20) respectively in 2 or more previous cesareans. (Table-1)

Thinned out lower uterine segment and scar dehiscence frequency was more in pregnancies with short inter pregnancy interval (18 months) 31% (40) Vs 20% (96) and 6.2% (8) Vs 0.8% (4) respectively. (Table-2), (Table-3). No case of scar rupture had short inter pregnancy interval.

DISCUSSION

600 pregnant women studied who had repeat cesarean constitute around 35-40% of all cesarean deliveries. The frequency of complications were more in case of group 2 than group 1 as in *Khursheed et al* study.⁽⁶⁾ (TABLE-4). The frequency of dense adhesions was comparable in both studies. Frequency of thinned out lower uterine segment was more in present study reason might be the subjective assessment of thickness. The frequency of scar dehiscence, scar rupture, adherent placenta and bladder injury were more in present study as it included women with more than one cesarean into a single group while the other study had sub divided them into women with two and three previous cesareans.

Thinned out lower uterine segment and scar dehiscence frequency was more in pregnancies with short inter pregnancy interval (18 months) 31 Vs 20 & 9.4 Vs 8.1 respectively which was statistically significant.

The frequency of scar dehiscence was 1.8% in group 1 which was 1.03% in a study by Bashiri A. and co workers in 2008.⁽⁹⁾ The increased frequency might be due to small sample size.

VBAC trial was given for 4 patients out of 8 cases of scar rupture, 2 were taken up in view of scar rupture, fetal heart variability in other 2 patients. Rest 4 was silent scar ruptures noted intra operatively. None of them had short inter pregnancy interval in contrast to a study by D. Stamilio and co workers⁽¹²⁾ which concluded that short inter pregnancy interval increases risk for uterine rupture.

In cases of bladder injury, the frequency was 2.2% and 9.3% in group 1 and group 2 respectively which was statistically significant. 10 out of 12 in group 1 & 16 out of 20 in group 2 had associated dense adhesions intra-operatively where as it was 0.81% in group 1 in a study by *Rahman*.⁽¹³⁾ Repeat CS and presence of adhesions were found to be statistically significant risk factors in the study. Small sample size might be one of the reasons for high frequency in present study and associated adhesions.

In a study by Tulandi T. and co workers in 2009, it was analysed that the frequency of adhesions with one Cesarean was 24.4%, 42.8% after 2 Cesareans. In the present study, it was 24.2% & 50% respectively which was statistically significant.⁽¹⁴⁾

In the present study placenta praevia was 6.7 & 12.5 of which adherent placenta was seen in 16.6% & 62.5% respectively. Chattopadhyay SK. Study in 1993 states that Placenta praevia complicated 2.54% of cases with a previous cesarean compared with 0.44% of cases with no scar & accreta accounts for 10% ,59% respectively with 1 & 2 or more cesareans.⁽¹⁵⁾

Limitation Of The Study

Finding of thinned out lower uterine segment is only subjective, Inter -observer variability might be present while assessing the thickness.

Operative notes of previous cesarean were not available for patients operated outside which limits the study.

CONCLUSION

- The frequency of complications increase with increase in number of prior cesarean.
- There was a statistically significant difference between previous one and more than one cesarean in terms of dense adhesions, thinned out lower uterine segment, adherent placenta and bladder injury. Similar significance was noted in case of thinned out lower uterine segment and scar dehiscence with respect to inter pregnancy interval less than and more than 18 months.
- The most common complication was dense adhesion and least common was uterine rupture.
- The frequency of thinned out lower uterine segment and scar dehiscence was more in patients with inter pregnancy interval less than 18 months.
- The incidence of placenta praevia increases with increase in number of prior cesareans.
- Bladder injury was associated mostly with dense adhesions.

Problems associated with repeat cesarean section may prove detrimental in developing countries because of lack of availability of obstetrics facilities and less favorable circumstances for the management of these patients. Therefore, it is very essential to keep our cesarean section rate to a reasonable limit.

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