ORIGINAL ARTICLE

Maternal Morbidity Associated with Caesarean Section at Fully Dilated Cervix

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ABSTRACT

Objective: To study the rate and maternal morbidity due to second stage caesarean section at fully dilated cervix.

Methods: This cross sectional descriptive study was conducted from first January 2015 to 30 April 2018 at Gynae and Obs department of PUMHS, Nawabshah at tertiary care hospital. Women with fully dilated cervix having singleton pregnancy with cephalic presentation at more than 37 weeks' gestation with induce or spontaneous labour and failed instrumental vaginal delivery. The demographic and clinical data was collected on a pre-designed proforma, and statistically analysed.

Results: During study period total 9532/29000 (38%) women were delivered by caesarean section over all ratio of operative delivery was 38 % in hospital from these operative births 356 women (3.7%) were performed at full cervical dilatation at more than 37 weeks' gestation. Maternal complication noted during operation were postpartum haemorrhage (30%), increase need of blood transfusion about 9-12 % while operative complication were 6-8 % longer stay at hospital during post-operative period was noted about 35 %.

Conclusion: Study conclude almost same type of complication but some variation in percentage. Caesarean section during labouring or non-labouring women have increased rate of morbidity.

Key Words: Caesarean Section, Cervical Dilatation, Morbidity, Postpartum Haemorrhage.

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INTRODUCTION:

Obstetrics is characterized by rapidly evolving clinical situation such as risk to mother and fetus are there and potential for misjudgement or mismanagement by attending doctor and mid wife is always present so in today's hostile era of obstetrics practice where majority of litigation belongs to obstetrics field, Cesarean section have important place for safe delivery of baby and mother[1]. Now a day's caesarean sections are the one of commonly performed procedure done all over world[2]. As many people think that birth is hijacked by modern obstetricians both in developed as well as low socioeconomic countries. Rising rate of caesarean section are seen both nationally as well as internationally[3,4]. WHO recommend caesarean section rate about 15-19 % beyond this rate there are no more benefit to both mother and baby is seen[5], caesarean section rate in UK and USA are 25.5 and 32.8 % respectively[6] while in Pakistan it is 25.2%[7]. As with any operative procedure, caesareans section is not without harm/complication. Although after widespread practice of lower segment caesarean section incision morbidity and mortality reduce to some extent but still caesarean section related morbidity and mortality possess significant challenge to obstetrician. Maternal morbidity defined by WHO is any health condition which is aggravated or related by pregnancy and delivery by any route which cause negative effect on

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women's wellbeing, these morbidities can lead to short term and long term effect on mother and baby[8]. So maternal morbidity rate is indicator of quality of care in modern obstetrics. A recent data using Robson criteria clearly indicate that women with past history of delivery by caesarean section are primarily important determinant of caesarean section rate[9]. so again this fact is highlighted that unnecessary operative delivery should be avoided as much as possible. Similarly, caesarean section during 2nd stage of labour is also witness increase in rate. Cesarean section at fully dilated cervix is difficult, complex procedure to perform where pelvic anatomy is almost completely distorted, fetal head is deeply engaged in pelvic cavity of mother and if moulding of baby head are there then it is more challenging for obstetrician to reach baby head[10]. During this procedure there should be presence of senior obstetrician as there is increase in maternal and neonatal morbidity which could be due to thinning and stretching of lower segment which traumatized due to manipulation done for delivery of baby and these ranges from extension of tear to uterine angle, broad ligament some time necessitate hysterectomy, postpartum haemorrhage, increased risk of blood transfusion then its related complication, pyrexia, sepsis difficult delivery of head of baby injury to surrounding viscera like bladder, intestinal loops ,increase time of surgical procedure, obstetrical hysterectomy, abdominal burst wound dehiscence, increased risk of thromboembolism, increased rate of admission in high dependency unit or ICU, increase hospital stays of more than 5 days postoperatively as compare to non-labouring caesarean section. While long term sequels include increased rate of placenta praevia, adherent placenta, ectopic pregnancy, pelvic pain and infertility. Caesarean section at fully dilated cervix have many factors like cephalopelvic disproportion, fetal malposition such as persistent occipito posterior position or occipito transverse position, unnecessary induction of labour under use of oxytocin, fear of applying instrumental vaginal deliveries' by junior doctor, lack of senior obstetriatician presence[10]. These all leads to increase rate of caesareans section so now emphases place on reducing overall caesarean section rate especially caesareans section performed during 2nd stage of labour. In this way we can reduce maternal morbidity and mortality. Still there is no national or international guideline on how to safely deliver baby during second stage of labour caesarean section. The aim of this study is to asses rate and morbidity related to caesarean section performed at fully dilated cervix so that certain measures could be done to reduce suffering of mothers so she can contribute in wellbeing of society.

METHODS:

This is cross sectional descriptive type of study that was conducted on women who undergone caesarean section during second stage of labour or fully dilated cervix from first January 2015 to 30 April 2018 at Gynae and Obs department of PUMHS Nawabshah, at tertiary care hospital. The work was started after approval of recommended ethical committee. These cases were identify and taken through operating theatre register of obstetric department, electronic medical record of obstetric ward, labour room register record, patient operating notes and clinical files. Women included in this study were women with a singleton, presentation with gestational age more than 37 weeks with induced or spontaneous labour and/or failed instrumental vaginal delivery, while women with twin gestation, preterm labour, placenta previa and pregnancy with other co-morbid (eclampsia and gestational diabetes) were excluded from the study..

A predesigned proforma filled after completing comprehensive obstetrical clinical workup (including history, general physical examination, abdominal and pelvic examination, relevant investigations). Patient managed according to feto-maternal grounds and complications noted on proforma such as post-partum haemorrhage. For estimation of postpartum haemorrhage, we measure blood loss by measuring suction bottle and by weighing swab. Increased need of blood transfusion, operative complication such bladder, bowel injury, extension of incision to broad ligament, postoperative stay and data analysed.

RESULTS:

During study period total 9532/29000, women were delivered by caesarean section

overall ratio of operative delivery was 38 percent in hospital where usually we get referral patient. This ratio varies from 36 to 39 percent over more than 3 years' study period, out of 9532 women 356 women underwent caesarean section at fully dilated cervix so ratio of 2nd stage was 3.7 percent while according to royal collage of obstetrician and gynaecologist ratio is 6%, while our study shows ratio 2.96% to 3.7 % in whole study period as shown in table-I. Postpartum haemorrhage was one of the commonest morbidity encounter by obstetrician during Caesarean section at fully dilated cervix. It affects nearly 30 percent of women and the management of postpartum haemorrhage ranges from meticulous stitching and application of utero tonic agent to B lynch uterine tamponade and uterine packing, uterine artery ligation to obstetrical hysterectomy was performed. Many women need blood transfusion of more than 3 pint of blood during the procedure while 6% women has intraoperative complication during this procedure 2% get bladder injury 1% get injury to bowel loops,4 % extend tears to uterine angle broad ligament while 2 women again re shifted to operation theatre after developing postpartum haemorrhage for further management. These women have increase hospital stay during postpartum period more than 5 days.4 women suffered from thromboembolism that was severe enough to receive coagulation therapy as shown in table-II. While 2 maternal mortality cases reported during caesarean section in this study period.

Table-I: Rate of Cessarian Section at Fully Dilated Cervix

	2015	2016	2017	2018
C/section at fully dilated cervix	96/2576 (3.7%)	106/3574 (2.96%)	104/3074 (3.3%)	48/1332 (3.6%)

Table-II: Maternal Morbidity

Variable	2015 (n=96)	2016 (n=106)	2017 (n=104)	2018 (n=48)
PPH >1000ml blood	30	34	28	14
Blood Transfusion	9	12	8	6
Operative Complication	6	8	5	2
Thrombo embolism	0	1	2	1
PostOperative Hospital >5 days	--	--	--	--

DISCUSSION:

The rate of caesarean section is increasing worldwide day by day as evident by recent data[11-14]. Simultaneously caesarean section during second stage at fully dilated cervix are also witness same rise as evident by our result. This rise in caesarean section have many reason that ranges from fetal malposition, injudicious use of oxytocin unnecessary induction of labour, fear of medico legal action by patient's attendant, deficiency in training of juniors in instrumental delivery, absence of senior doctor during delivery or decision making decrease use of instrument delivery for these complicated cases these all factor contribute to rise in caesarean section during second stage of labour as with caesarean section in non-labouring women. Caesarean section during second stage increase complication and risk to both mother and baby. In our research work, we are not concern with fetal outcome so we are not discussing neonatal morbidity and mortality in this study. Most common complica-tion during Caesarean section at fully dilation of cervix was postpartum haemorrhage[15,16] which is also number one cause of maternal mortality all over the world. About 30% women in our study develop postpartum

haemorrhage as compare to 12% as in Davis G et all study .The common cause of postpartum haemorrhage in these women were uterine atony which affect about 50 to 60 % women while 30 percent have trauma related to operative procedure while rest are due to coagulation failure. Our majority of patients were already have high incident of anaemia so postpartum haemorrhage possess immediate life threatening condition to women which need increase requirement of blood transfusion before and after operative procedure as compare to non-labouring caesarean procedure .while in my study 6 % patient need blood transfusion during and after procedure as compare to Davis G et al study which shows only 1.5 % reason may be due to decrease incidence of anemia in their women and early arrival of women in the hospital. Operative complication include extension of tear in broad ligament uterine arteries are also evident in our study is 6 % as compare to international study about 4 to 6 %.2 women in this study have also complication of mimicking upper vagina to lower segment of uterus known as laparoelytropomy[17] as Davis G et al study shown only 1 woman have this complication .there is also increase in surgical time noted during caesarean section performed at fully dilated cervix as compare to non-labouring caesarean section. Women have prolong postoperative stay during recovery period found to be same in my study as well as in pilot study. As other morbidity during caesarean section are development of thromboembolism.4 women develop this complication needs therapy for this. 2 women need obstetrical hysterectomy .while study period of my study is 3 and half years as compare to 5 year period of Davis G at al study. As compare to non-labouring caesarean section, caesarean section during labouring is difficult complex and challenging procedure for obstetrician .it also has increased maternal morbidity and mortality as compare to non-labouring caesarean section so we have to reduce caesarean section rate not only in non-labouring women but in labouring women by implementing a proper documentation system and presence of senior obstetrician during such deliveries and involving obstetrician in decision making .There should be proper standard training of juniors in conducting instrumental vaginal deliveries .judicious and wise use of oxytocin can reduce operative delivery during 2nd stage of labour in fully dilated cervix.

CONCLUSION:

The rate and morbidity was increasing during Cesarean section of labouring women as already noted in previous designated studies, only we found more patient need blood transfusion as compared to pilot study. Although non-labouring women experience less complication during operation. We found same complication but with some difference in percentage of these complications during Cesarean section.

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