

A Study of Feto Maternal Out Come in Caesarean Sections Done in Second Stage of Labour**Maddila Yamuna¹, M Pavani², P Sudha Malini³**^{1,2}Assistant Professor, Department of OBG, Andhra Medical College, Visakhapatnam, Andhrapradesh, India³Associate Professor, Department of OBG, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India

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Corresponding Author: Dr. P Sudha Malini

Conflict of interest: Nil

Abstract:

Background: Second stage of labour starts from full dilatation of cervix i.e 10 cm to delivery of the fetus. Second stage caesarean sections results in much maternal and fetal morbidity. World widely nearly 10-20% deliveries require interventions like caesarean delivery and instrumental delivery. WHO recommends an ideal caesarean section rate between 10-15%. Now a day there is an increase trend in caesarean sections. Objective of this study is to determine rates and feto maternal outcome in caesarean sections done in 2nd stage of labour.

Method: This is a prospective observational study done in all women with singleton pregnancy at term (>37wks) at victoria government hospital from august 2022 to august 2023 regarding maternal outcome and neonatal outcome in cases of caesarean section in second stage of labour.

Results: Total number of deliveries during this period is 5850 of which 3528 are vaginal deliveries 2252 are by caesarean sections. Section rate in this hospital is 38.29%. Out of 68 cases that are included in this study depending on inclusion and exclusion criteria, 54 cases are primigravida (79.41%). In this study most common indication is non-progression of labour (55.8%). Most common post-operative complication is febrile episode. Neonatal outcomes in this study are 66 live births and 2 still births. Mean birth weight is 2.8 kg.

Conclusion: Caesarean sections performed in second stage of labour are technically difficult due to deeply engaged fetal head in pelvis leading to difficult head delivery. Increase incidence of atonic PPH, extension of uterine incision, tears of LUS is due to thinned out and over stretched lower uterine segment, increased wound infection, post-operative fever, prolonged catheterisation in the post-operative period is observed.

Keyword: Second Stage of Labour, Maternal Morbidity, Neonatal Morbidity, Caesarean Section.

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Introduction

Caesarean section is most common major abdominal surgery in females. World widely nearly 10-20% deliveries require interventions like caesarean delivery and instrumental delivery¹.this increase in rate is of significant international concern, with reported rates of USA 31.7%, and UK 31.2% [2,3]. WHO recommends an ideal caesarean section rate between 10-15% [1].

Now a days there is an increase trend in caesarean sections is happening, especially second stage caesarean section is major concern in modern obstetrics. Recent data suggesting prevalence of second stage caesarean section is 0.9 to 2.2%. [4].

Second stage of labour starts from full dilatation of cervix i.e 10 cm to delivery of the fetus. Caesarean section can be done before labour, during 1st and 2nd stage of labour .Usually second stage last for 2 hours. According to RCOG reports approximately

6% caesarean sections happening in second stage[5]. 2nd stage caesarean section is technically difficulty due to engagement of fetal head.

2nd stage of labour associated with increased maternal and fetal complications like tearing of lower uterine segment, and surrounding structures, as well uterine extension, PPH, bladder injury, haematuria, prolonged operating time, broad ligament haematoma, puerperal pyrexia, infections, prolonged catheterisation.

Fetal complications are birth asphyxia, NICU admissions, birth injuries, even still births. One of the greatest challenge in 2nd stage caesarean section is decision making. In current obstetrics, instrumental delivery trend is decreasing due to lack of technical skills and training. Hence this study is designed to assess indications and maternal and fetal complications of 2nd stage of labour.

Objectives:

- To asses rate and indications of 2nd stage cae-sarean sections and.
- To study the feto maternal outcome in 2nd stage caesarean section.

Methods

This is a prospective observational study done in victoria government hospital from august 2022 to august 2023.

Inclusion criteria

- Age 18-40 yrs.
- Primi/multi gravida.
- Singleton pregnancy.
- >37wks.
- Cephalic presentation.
- 2nd stage of labour.

Exclusion criteria

- Preterm.
- Multiple pregnancy.
- Mal presentations.
- Medical complications associated pregnancy.

Statistical analysis: Data was stored in MS excel for analysis.

Results

Total number of deliveries during this period is 5850 .of which 3528 are vaginal deliveries 2252 are by caesarean sections. Section rate in this hospital is 38.29%. Among 2252 sections 68 cases were done in 2nd stage.

Rate of 2ndstage caesarean section is 3.01%. Meanwhile 152 interventions attempted in this 60 instrumental, 58 vaccume deliveries.

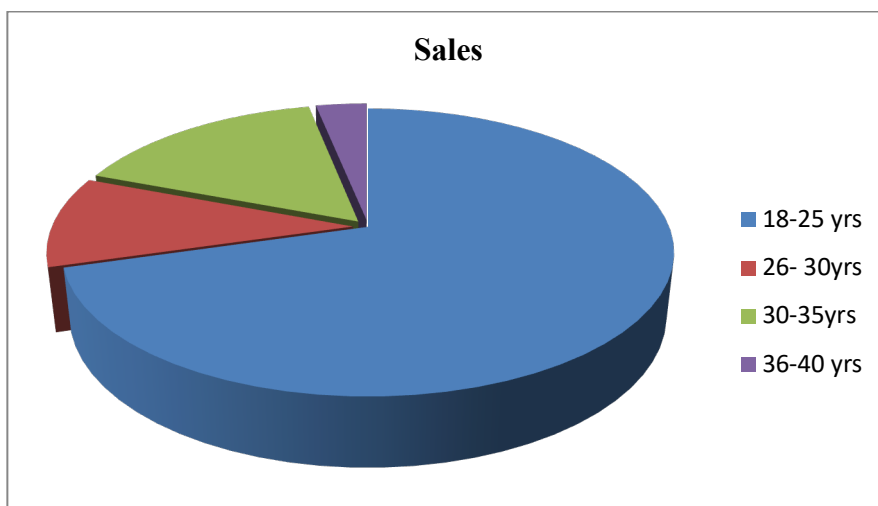


Figure 1: Age distribution of patients (n=68)

Most cases were in the age group of 26-30yrs (81%). 22 cases are in the age group of 20-25yrs (32.3%). 32 patients are belonged to age group of 26to 30yrs. (40-05%) 14 were in the age group of 30-35yrs (20.5%).

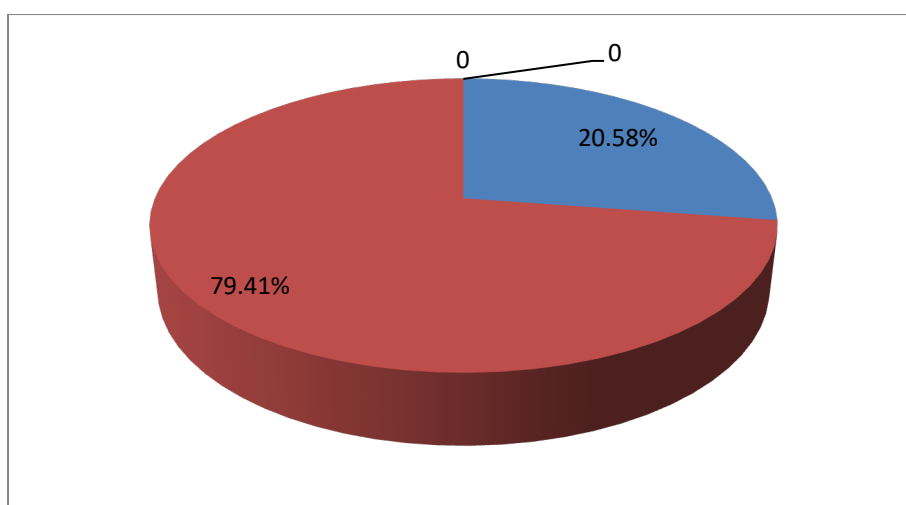


Figure 2: Distribution of cases according to parity

Out of 68 cases 54 cases are primigravida (79.41%). 14 cases were multi gravida (20.58%).

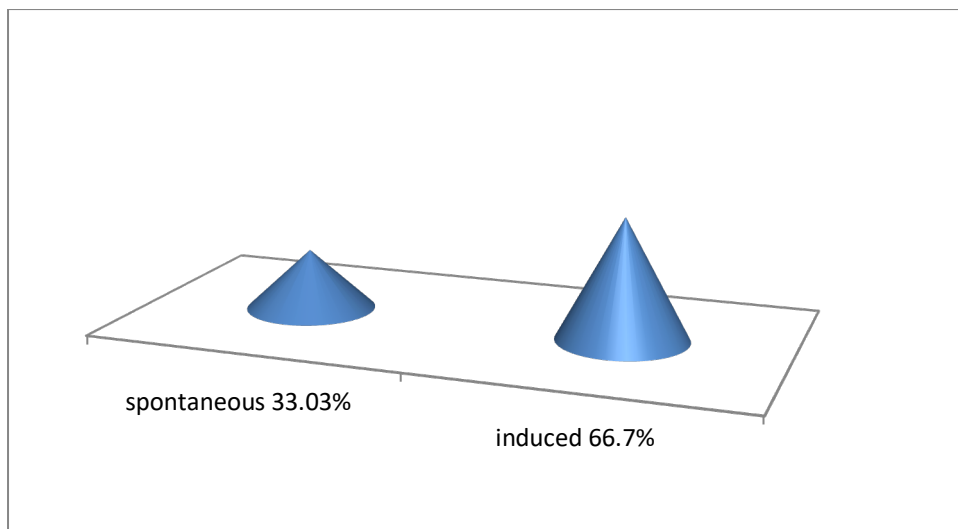


Figure 3: Distribution of cases according to onset of labour

33.03% cases presented with spontaneous onset of labour pains, 66.7% case labour is induced.

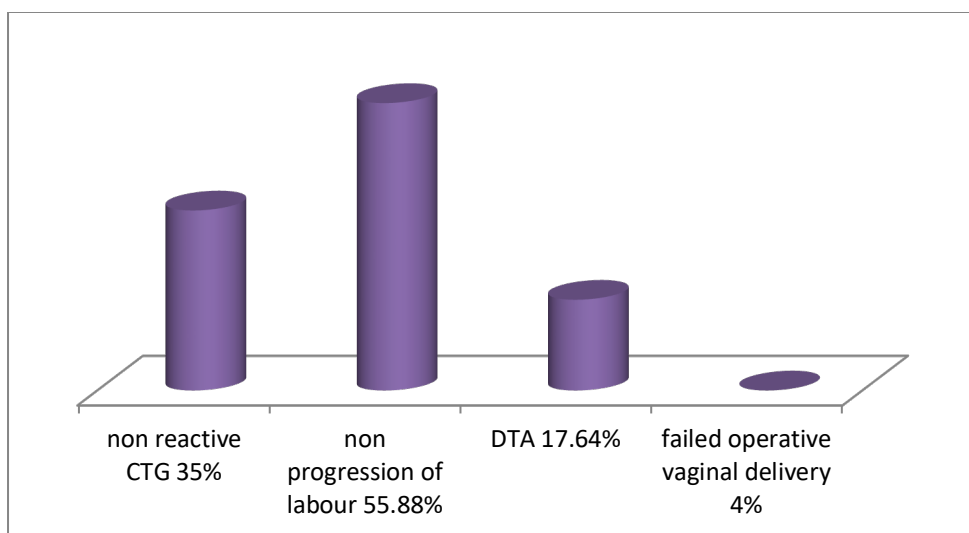


Figure 4: indications of second stage C-section

In this study most common indication is non-progression of labour (55.8%).

Table 1: Distribution of cases according to mode of head delivery

Mode of head delivery	%
Vertex method	84.3%
Partwardhan method	12%
Modified partwardhan	3.7%

Table 2: intra operative complications

Complications	Number	%
Atonic PPH	29	42.64%
Uterine angle extension	4	5.8%
Bladder injury	1	1.47%
Vaginal injury	1	1.47%
haematoma	14	20.58%
hematuria	25	36.76%
Blood transfusion	20	29.41%

Most common post-operative complication is febrile episode. Some patient are presented with more than 1 complication.

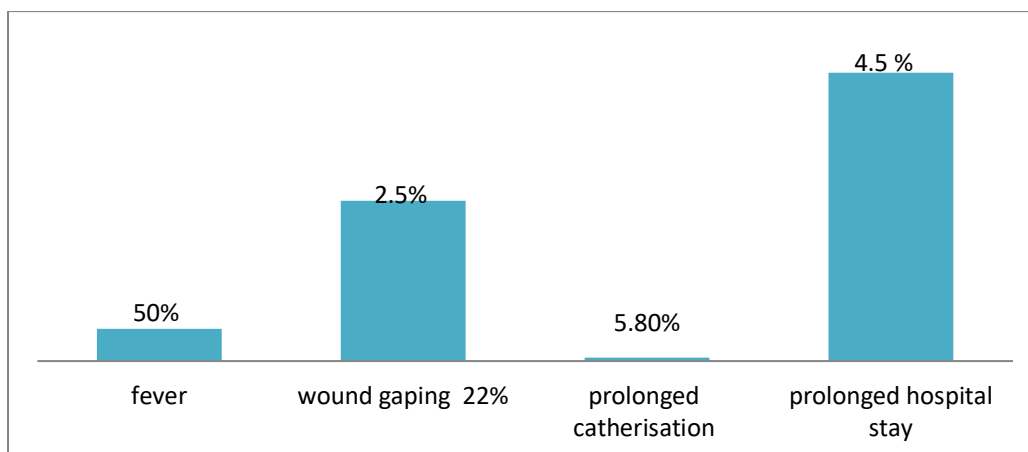
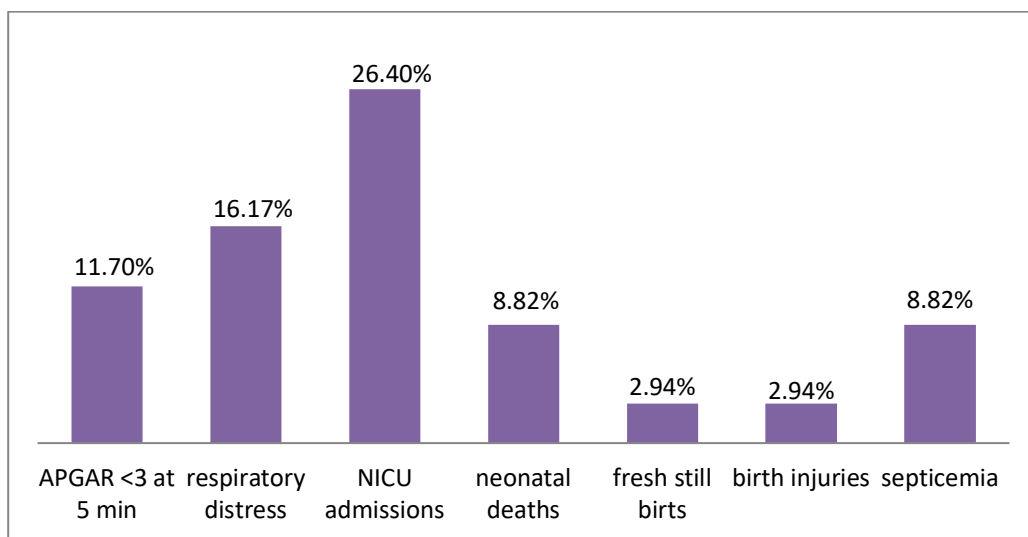


Figure 5: Post-operative complications



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Figure 6: Neonatal Complications

Neonatal outcomes in this study are 66 live births and 2 still births .mean birth weight is 2.8 kg. 40 out of 66 are healthy and good APGAR at birth. 18 (26.4%) babies need NICU admissions. out of 18, 6 babies died due to birth asphyxia related complications.

Discussion

In the present study, indications and fetomaternal outcome of second stage C-section conducted at tertiary care hospital were studied. Total 68 cases are studied as per inclusion and exclusion criteria. Most of the cases are belongs to age group of 26-30yrs (40.05%). Mean age was 28.3% .similarilyvashi et al [6] study mean age of cases studied is 26.7 yrs. Additionally Govinder [7] et al study mean age is 25.2yrs.

Most of cases in this study are primigravida 79.41%, whereas multi are 20.58%. Similarity with study done by dranusha SR [8] (2020)74% are

primigravida, babre et (2017) [9] al study 74% are primigravida. increased incidence is due to cephalo pelvic disproportion main cause most common indication is non-progression of labour (55.88%), least common indication is fetal distress(35%), in Goswami [10] et al (2020) common indications are non-progression of labour with fetal distress 38% followed by deflexed head (16%) and DTA (14%). method of delivery of deeply engaged head is by vertex method (84.3%) is most commonly used method in this study similar findings reported in Gupta K [11] et al 2019 study 44% babies were delivered by vertex, 31% by parwardhan metho.

In present study atonic PPH and haematuria are most common intra op complications. Gupta K [11] et al 2019 found atonic PPH 35%, post-operative fever, wound infection, prolonged catheterisation were post-operative complications. Khaniya B [12] et al 2020 study reported 38.8% cases need prolonged catheterisation, 27.7% developed pyrexia,

13.88% cases need prolonged hospital stay. In Anusha SR [8] study 2020 wound infection noted in 20%, 40% of cases developed fever. There was no incidence of maternal deaths noted in our study and also in NandanTet al study and Balasaheb khadbed [13] study.

Neonatal morbidity in terms of NICU admissions and prolonged NICU stay reported higher in 2nd stage caesarean section, due to fetal compromise with prolonged duration of delivery. In the present study NICU admissions are 26.4% due to birth asphyxia. Balasaheb Khabded [13] et al 2022 study 16.11% NICU admissions are due to birth asphyxia. Khaniya Bet al reported 5.54% needs NICU admissions, 2.77% cases still birth occurred. in our study 8.83% neonatal mortality reported.

Conclusion

Caesarean sections performed in second stage of labour are technically difficult due to deeply engaged fetalhead in pelvis leads to difficult head delivery. atonic PPH, extension of uterine incision, tears of LUS is due to thinned out and over stretched lower uterine segment, increased wound infection, post-operative fever, prolonged catheterisation are some of the post-operative complications.

These are the factors to be anticipated to reduce morbidity and mortality. Proper judgement and timely decision making is very important and challenging. Senior obstetrician and paediatrician involvement plays a vital role in decreasing the mortality and morbidity associated with of 2nd stage caesarean section.

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