

Parity Wise Outcome of Labour in Singleton Pregnancies at a Tertiary Care Hospital at Urban Mumbai

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Abstract: ***Aims and objectives:** To evaluate the prognosis of obstetric complications by parity in an Urban center Cama and Albless Hospital, Mumbai. **Material and Method:** We conducted a retrospective, cross-sectional study that evaluated all women admitted to Cama and Albless Hospital Mumbai whether they were primiparous or multiparous. The data for this study covered a 3-month period, from July 1, 2024 to September 30, 2024. **Results:** Between July 2024 and September 2024, we've registered 100 deliveries. According to our study At a Tertiary care hospital 75% vaginal delivery and 25% Cesarean section. Out of which 17% of cesarean sections are of primigravida women and 32% of cesarean sections are of Multigravida women. According to our study 9% of complications are there during labour out of which 7% are of primigravida women and 2% are of Multigravida women. We also recommend continuing this work by singling out multiparas and grand multiparas, in order to better understand the obstetric prognosis linked to parity.*

Keywords: Direct Obstetric Complications, Primiparous, Multiparous

1. Introduction

Parity is the number of pregnancies a female has carried past 20 weeks. Parity (P) can be calculated by determining how many deliveries a female has had past 20 weeks. For example, P1 means that the female has delivered once regardless if this event was a single child, twins, or other multiples. Like wise P2, P3 etc and so on.

The debate over parity and the associated risks to pregnancy outcomes has been ongoing for many decades. A study was carried out to assess the link between parity and pregnancy outcomes and to clarify how risk classification based on parity is determined. This cross-sectional analysis utilized a, routinely collected dataset of singleton births from August to September 2023 at CAMA and Albless Hospital in Mumbai. The study compared pregnancy outcomes across different parity groups. Results indicated a significant association between various levels of parity and pregnancy outcomes, including obstetric complications, neonatal morbidity, and perinatal mortality. These associations remained significant after adjusting for potential confounders such as age, maternal smoking status, and socioeconomic status. In terms of obstetric complications, neonatal morbidity, and perinatal mortality, subjects can be classified into 3 groups according to parity: nulliparity, low multiparity (parity 1, 2, and 3), and grand multipara (parity 4 to 8). Compared with low multiparity, mothers and babies of grand multipara are at higher risk. This study supported the definition of grand multiparity that start from 4th parity. Attention should be paid to subjects of nulliparity and grand multiparity for their different problems. (Am J Obstet Gynecol 2002; 186: 274 - 8.

2. Review of Literature

In a similar study carried out by Helene warden chami at Gynaecology and obstetrics clinic Aristide Dantec Teaching hospital Cheikh Anta Diop university, Dakar Senegal it was seen that there were 75% vaginal delivery and 25% cesarean section. About 9% has direct obstetrics complications.43 %

were Multigravida and 67% were primigravida according to this study has done.

Aims and Objectives:

- 1) To study the mode of delivery according to parity
- 2) To study the fetomaternal outcome according to parity

Objectives:

- 1) To study the obsteric outcome according to parity
- 2) To study the complications associated with parity and labour and immediate post- partum period

3. Methodology

Procedure For Data Collection and Analysis

We conducted a retrospective study, which evaluated all women admitted to CAMA and Albless Hospital Mumbai for the management of their pregnancy (childbirth, abortion, ectopic pregnancy), whether they were primiparous or multiparous. For each patient, we collected and analyzed the socio-demographic characteristics; data on pregnancy and childbirth; pathologies associated with pregnancy (hypertension, diabetes, premature rupture of membranes); direct obstetric complications (antepartum haemorrhage and postpartum haemorrhage, prolonged labor and dystocia, severe pre-eclampsia, uterine rupture, puerperal infection); parameters related to the newborn (birth weight, fetal status at birth).

4. Results and Observations

Table 1: Parity-wise outcome of mode of delivery of patients

GRAVIDA Score	LSCS	FTND	PTVgD
Primigravida	17	26	
G2	5	30	1
G3	1	8	3
G4	1	6	
G5	1	1	
Total	25	71	4
%	25%	71%	4%

- Out of 100 patients in this study, 75% of them had delivered vaginally out of which 4% were preterm deliveries, 25% of them had underwent caesarean section.

Table 2: Age wise distribution of mode of delivery

AGE	LSCS	FTND	PTVgD
18 - 25 YRS	12	40	3
25 - 30 YRS	9	22	1
30 - 35 YRS	3	9	
35 - 40 YRS	1		
%			

- In the age group of 18 - 25 years 12 LSCS and 40 FTND 3PTVgD
- In the age group of 25 - 30 years 9 LSCS and 22 FTND 1 PTVgD

Table 3: Indication of LSCS in this study

Parity	Indication of Section	Number
Primigravida	Cpd	2
	Non re - assuaring nst	4
	fetal distress	3
	Npol	8 (most common indication)
	Deep transverse arrest	1
G2	Non re - assuaring nst	
	Fetal distress	1
	Npol	3
	Thick msf	1
G3	Prev 1 lscs	
	Non - reassuaring nst	1
	Fetal distress	
	Npol	
G4	Prev 2 lscs	
	Non re - assuaring nst	
	Fetal distress	
	Npol	1
G5	Prev3 lscs	
	Non re - assuaring nst	
	Fetal distress	
	Npol	
G6	Prev 4 lscs	

- Most common indication in primigravida patients is non progress of labour in our study
- most common indication in second gravida for lscs is non progress of labour in our study

Table 4: Distribution of newborns according to weight.

	Extremely low birth weight 1.5 - 1.9 kg	Very low birth weight 2 - 2.4kg	Low birth weight 2.5 - 2.9kg	3 - 3.5 kg	3.6 - 4.5
primigravida	1	7	16	14	3
G2	1	5	10	21	1
G3	3		5	3	
G4			5	4	
G5					1
G6					

- Most common weight group is 3 - 3.5 kg i. e. out of 100 baby 42 baby are of weight group of 3 - 3.5 kg
- Second most common age group is 2.5 - 2.9 kg i. e. out of 100 baby 36 are of 2.5 - 3.5 kg

Table 5: Complications during Labour

Gravida Score	Post Partum Haemorrhage atonic traumatic	Subinvolution	Intra - Uterine Fetal Death	Neonatal ICU admissions
Primigravida	2 1	1	1	2
G2				
G3				
G4	1			
Multipara	1			

- Out of total 9 complications 7 are complications of primigravida patients
- Out of total 9 complications only 2 are complications of multigravida patients

5. Discussion

This study was conducted Between July 2023, August 2023 and September, 2023, at tertiary care hospital, we recorded in 100 deliveries.

The average age of the patients was 27 years with extremes of 19 and 35 years. More than half of the sample (55%) were aged between 18 and 25 years old.

We registered (75%) vaginal deliveries and (25%) cesarean section.

Preterm, delivery rates were slightly higher in the primiparous group.

Caesarean section was more common in primiparous (17%) than in multiparous women (26%). This difference is not statistically significant (p = 0.219).

The primipara was more likely to be Non progress of labour, Non reassuring NST. Multiparous tended to be operated for Non progress of labour, fetal distress

Newborns with a birth weight of less than 2500 grams were found to be 8% in primiparous women near about Similar in Multiparous women (9%).

9% of the women had complications during post delivery of which 7% are of primigravida and only 2% of Multigravida 2 - Atonic pph., 1 Traumatic pph, and 1 subinvolution 1 iufd and 2 NICU admission

The various studies devoted to analysing complications during labour have given a whole range of results. For example, a prospective population study in six West African countries found that 6% of pregnant women had serious direct obstetric complications [7]. The authors indicate that their observations probably underestimate the reality because the terminology used to define complications was linked to medical interventions that may not be practicable in the health facilities under investigation. A prospective study of deliveries in India found an incidence of 17.7% for direct obstetric complications during labor [8]. However, these studies did not consider complications during pregnancy (complications of abortion and ectopic pregnancies), so the actual percentage of women with direct complications was probably higher. 2% of multiparous and 1% of primiparous women had at least one direct obstetric complication.

The retrospective nature of the study involves a significant recording bias, as the data are collected from the records of patients already discharged from the Cama And Albless Hospital Mumbai. Some parameters could have been omitted. In addition, we did not have any information concerning the state of health of the patients at the time of the post - natal visits; this factor may have contributed to underestimating maternal and neonatal morbidity and mortality rates.

6. Conclusion

The relationship between parity and the complications of pregnancy continues to be of interest to obstetricians. Some authors consider primigravida as a marker of risk, others have concluded that parity does not influence the outcome of pregnancy. Our study confirms that primiparity is a source of obstetric complications. However, some complications were more common in primiparity and others were more likely to occur in multiparas. We also recommend continuing this work by singling out multiparas and large multiparas, in order to better understand the obstetric prognosis linked to parity.

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