

## One to One Labour Care at Term Pregnancy

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### Keywords:

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## 1. Abstract

**1.1. Introduction:** Primigravida is crucial for future obstetrical performance. Unfortunately, this element of women's health does not receive much attention. Results of this study will be shared with local media outlets which will help aware local masses about the importance of proper immunization, proper medical checkups and investigations emphasizing care during pregnancy and labour in our local population.

**1.2. Objective:** To determine outcomes of labour in primigravida who have had one to one labour care at Tertiary Care Hospital.

**1.3. Methodology:** This Descriptive Case Series was conducted in the Department of Obs & Gynae, Hayatabad Medical Complex, Peshawar from June, 2021 to Dec, 2021. Past medical and surgical history was taken in detail any medical disorder associated with pregnancy was noted. Gestational age was calculated from the last menstrual period and was confirmed on first trimester dating scan using crown-rump length.

**1.4. Results:** In our setup patients who were given one to one care during labour was Mean age was 25.09+3.236. Mean gestational age was 36.53+1.35. Mean weight was 70.06+2.29. Mean height was 5.47+0.54. Mean BMI was 25.58+0.908. 158 (70.9%) patients were recorded in < 20 year age while 65 (29.1%) patients were recorded in > 20 years. 121 (54.3%) patients had normal vaginal delivery(p=0.02), 64 (28.7%) patients had C Section(p=0.02) and 38 (17.0%) patients had instrumental vaginal delivery(p=0.02). As per frequencies and percentages for outcomes of labour of primigravida, 60 (26.9%) presented with severe discomfort and the need for analgesia(p=0.080), 39 (17.5%) patients had postpartum hemorrhage, 13(5.8%) patients had pyrexia, 78(35.0%) patients had maternal anxiety, 22(9.9%) patients fetal distress in CTG during early labour, and 31 (13.9%) patients had perinatal mortality.

**1.5. Conclusion:** The most common finding was maternal anxiety followed by need of analgesia, postpartum hemorrhage and fetal distress. The results highlight the fact that primigravida is a risk factor for prolonged first and second stages of labour, increased chances of foetal distress during labour and may need intensive monitoring. Delivery of a primigravida outside hospital premises should be discouraged and women should be counselled for supervised antenatal care in the attendant support at the time of delivery.

## 2. Introduction

Primigravida is crucial for future obstetrical performance. Unfortunately, this element of women's health does not receive much attention [1]. In addition, people have faith in the midwives in their community. Due to their lack of information, they have misperceptions about vaccinations, medical examinations, and investigations, which prevents them from receiving the proper care throughout pregnancy and labour [2]. The process of labour involves the delivery of a foetus and placenta through the vagina. There are three stages to human labour [3]. Labor is a natural process, but complicating conditions might cause it to be interrupted, which occasionally calls for professional intervention [4]. Cardiotocographic monitoring is frequently used to trace foetal heart rate and uterine contractions over the course of labour [5]. Hematocrit, platelet count, and haemoglobin tests are frequently performed in laboratories. If there is a large blood loss after delivery, these tests may be repeated [6]. 52 primigravida individuals had one-on-one treatment in a study that involved 322 cases; according to the outcomes of their labour, 12.5% had instrumental births, 23.5% had caesarean sections, and 11.3% had vaginal births. 19.8% of patients had hypertension brought on by pregnancy. 12 patients (10.8%) experienced perinatal mortality, 7.7% had postpartum haemorrhage, and 12.0% had antipartum haemorrhage [7].

This study will give first hand evidence of labor outcomes in primigravida which is high risk group in our local population where adequate health care service is scarce and also due to lack of proper referral system especially in our rural areas results in mismanagement of such patients. Results of this study will be shared with local media outlets which will help aware local masses about the importance of proper immunization, proper medical checkups and investigations emphasizing care during pregnancy and labour.

### 3. Methodology

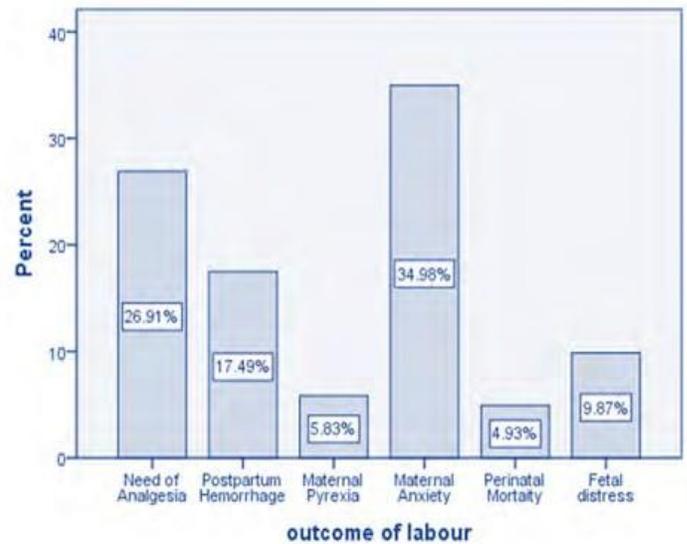
This Descriptive Case Series was conducted in the Departments of Obs & Gynae, Hayatabad Medical Complex, Peshawar from Jun, 2021-Dec 2021 with non-probability Consecutive sampling technique. Inclusion criteria: Primigravida women dating scan during the first trimester for the estimated delivery date with cephalic presentation having Bishop score of  $\leq 6$  suggesting unfavorable cervix, and intact membranes and Primigravida women with  $> 3$  visits after 20 weeks of gestation confirmed on LMP. While Women with contraindication to prostaglandins, abnormal placenta, previous Caesarian section, premature rupture of membranes and multigravida were excluded from this study.

Detail history, clinical examination and investigations was recorded. History included age of the patient, her education and socio-economic status. Past medical and surgical history was taken in detail any medical disorder associated with pregnancy was noted. Crown-rump length was used to determine gestational age based on the latest menstrual cycle and first trimester dating scan results. Prolonged labour was defined as more than 24 hours since the last labour induction. A uterine contraction frequency of five or more every ten minutes was considered to be uterine tachysystole. A single contraction in the uterus that lasts longer than a minute is known as uterine hypertonus, and the syndrome known as uterine hyper stimulation syndrome is characterised by non-reassuring FHR with tachysystole or hypertonus. Heart rate of the fetus exceeding 160 beats per minute for 10 minutes; bradycardia (heart rate below 110 beats per minute for 10 minutes); Non-reassuring FHR was characterised as absent, late, or prolonged decelerations; or varied decelerations (heart rate dropping to fewer than 70 beats per minute for 60 seconds). Age, gestational age, socioeconomic status, delivery method, and labour outcomes were documented.

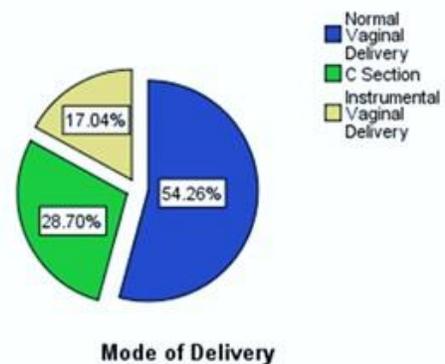
### 4. Results

Mean age was  $25.09 \pm 3.236$ . Mean gestational age was  $36.53 \pm 1.35$ . Mean weight was  $70.06 \pm 2.29$ . Mean height was  $5.47 \pm 0.54$ . Mean BMI was  $25.58 \pm 0.908$ . 158 (70.9%) patients had  $< 20$  years. 65 (29.1%) patients had  $> 20$  years. Mode of delivery were recorded in the 223 laboring patients, out of those 121 (54.3%) patients had normal vaginal delivery  $p=0.02$ , 64 (28.7%) ( $p<0.01$ ) patients had Cesarean Section and 38 (17.0%) patients had instrumental vaginal delivery ( $p=0.02$ ). (Pie chart No. 1). As per frequencies and percentages for outcomes of labour of primigravida, 60 (26.9%)

were recorded with need for analgesia ( $p=0.080$ ), 39 (17.5%) patients had postpartum hemorrhage, 13(5.8%) patients had puerperal pyrexia, 78(35.0%) patients had anxiety, 22(9.9%) patients had fetal distress during early labour, and 31 (13.9%) patients were recorded with perinatal mortality. (Bar Graph.1).



Bar Chart 1:



Pie Chart 1:

### 5. Discussion

Primigravida is important regarding subsequent obstetrical performance. Unfortunately, much importance is not given to this aspect of women's health [1]. Moreover, people trust their local birth attendants. Due to lack of education, they have got misconception regarding immunization, medical checkups and investigations which keep them away from due care during pregnancy and labour [2]. Labor is the process through which a fetus and placenta are delivered from the uterus through the vagina. Human labor divides into three stages [3]. Labor is a natural process, but it can suffer interruption by complicating factors, which at times necessitate clinical intervention [4]. During labor, cardiotocographic monitoring is often employed to monitor uterine contractions and

fetal heart rate over time [5]. Laboratory testing often includes the hemoglobin, hematocrit, and platelet count and are sometimes repeated following delivery if significant blood loss occurs [6]. In a study, out of 322 cases, 52 primigravida patients had one to one care and as per outcomes of labour amongst these patients, 12.5% had instrumental deliveries, 23.5% patients had caesarean section, 11.3% patients had vaginal deliveries. 19.8% patients had pregnancy induced hypertension. Antepartum hemorrhage was present in 12 (10.8%) patients, 7.7% patients had postpartum hemorrhage and 19.5% patients had perinatal mortality [7] which as compared to the findings of this study, where mean and SDs for age was 25.09+3.236. Mean and SDs for gestational age was 36.53+1.35. Mean and SDs for weight was 70.06+2.29. Mean and SDs for height was 5.47+0.54. Mean and SDs for BMI was 25.58+0.908. 158 (70.9%) patients were recorded in < 20 years age. 65 (29.1%) patients were recorded in > 20 years age. 121 (54.3%) patients had normal vaginal delivery, 64 (28.7%) patients had C Section and 38 (17.0%) patients had instrumental vaginal delivery. As per frequencies and percentages for outcomes of labour of primigravida, 27 (12.1%) were recorded with need for analgesia, 35 (15.7%) patients were recorded with postpartum hemorrhage, 22 (9.9%) patients were recorded with pyrexia, 44 (19.7%) patients were recorded with antepartum hemorrhage, 25 (11.2%) patients were recorded with fetal distress, 39 (17.5%) patients were recorded with pregnancy induced hypertension and 31 (13.9%) patients were recorded with perinatal mortality.

In one national study, the incidence of postpartum hemorrhage was 6% in primigravida and 2% in multigravida (RR 3; OR 3.1). These figures for PPH are within the expected range of 5 to 8% quoted in global literature. In that study, PPH was not associated with any maternal mortality. A study had found Nulliparity as a risk factor for primary post-partum haemorrhage. 22 Another study had reported a prolonged active, but not passive, second stage of labour to be associated with the risk of severe PPH in nulliparas. Yet another study had reported higher risk (55%) of postpartum hemorrhage for emergency CS and lower for vaginal deliveries (27%) compared with planned CS.<sup>24</sup> Others had found maternal infection and postpartum hemorrhage as related to the duration of the second stage. All the aforementioned findings are in agreement to the results of this study where for outcomes of labour of primigravida, 27 (12.1%) were recorded with need for analgesia, 35 (15.7%) patients were recorded with postpartum hemorrhage, 22 (9.9%) patients were recorded with pyrexia, 44 (19.7%) patients were recorded with antepartum hemorrhage, 25 (11.2%) patients were recorded with fetal distress, 39 (17.5%) patients were recorded with pregnancy induced hypertension and 31 (13.9%) patients were recorded with perinatal mortality.

Our study reported increased perinatal morbidity. However, other studies found that low- risk caesarean delivery at term was associated with a higher neonatal morbidity, NICU admissions and

maternal pain in the puerperium. Markers of abnormal labour significantly associated with spastic cerebral palsy (CP) in the basic analysis were total length of labour >20 hours and prolonged second stage of labour. Primiparity was associated with a significantly increased risk of low birthweight compared with multigravida<sup>8</sup>. However, another study found that parity and foetal weight had an insignificant effect on perinatal mortality. Current available data from well-resourced countries suggest that morbidity and mortality for both mother and baby arising from CS are higher when compared with vaginal delivery [9]. Women who experience an operative vaginal delivery have a very high probability of achieving a spontaneous vaginal delivery in a subsequent pregnancy as compared to primary CS, although the obstetrician faces a challenge for arresting the second stage of labour. In order to reduce the CS rate for failure to progress, adequate uterine contractions should be achieved during active phase of labour and careful thought should be given while making a decision for primary CS.

The majority of the women (253; 75.7%) reported receiving disrespectful maternity care in one or more ways. Most frequently, women were prohibited from choosing their own labour positions (142; 44.3%) and from moving around during giving birth (148; 42.5%). The chance of unprofessional maternity care when deliveries occurred at night. However, the attendance of private doctors and midwives as well as the availability of husbands to accompany their women in waiting rooms reduced the likelihood of considered disrespectful maternity care [10]. An Australian study found that the intricacy of the interactions between care providers and patient is brought home by our research, as is the need for care providers to negotiate the professional role that is an extra requirement of their employment. Increased focus is required on this component of employment in care work, with its attendant implications for both workers and patient, as Australian Government programmes and the community care sector increasingly realise the benefits of social support and companionship [11]. While in our study maternal anxiety (34.98%) was the main risk factor for caesarean delivery (28.70%) and fetal distress (9.87%) because there was no available attendant to help the patient during labour.

According to a study published in Uttar Pradesh, At least one sign of abuse was experienced by every woman in the research. In facilities in both sectors, there was a significant incidence of not offering a choice of delivering position (92%), as well as of routine manual uterine probing (80%). Private sector facilities performed worse than public sector facilities for not allowing birth companions (p=0.02) and for perineal shaving (p=0.001), while public sector facilities performed worse for not ensuring adequate privacy (p=0.001), not informing women prior to a vaginal examination (p=0.01), and for physical violence (p=0.04) [12]. A study published in Bologna, the mean age was 27.4 years, and 41.8% of the 435 women who met the inclusion requirements during the study period were primiparous. Births took place in health clinics (29%),

district hospitals (40%), and the referral hospital (31%). The average Bologna score was 2.03 out of a possible 5. (range: 0–4). Only one woman (0.2%) had a companion with her (her husband). Most women (84.8%) using a partograph, and 88.0% did not take oxytocin to augment their labour. Few (12.4%) had early skin-to-skin contact with their newborn, and few (6.2%) gave birth in a posture other than the supine position [13]. While in our study, mother worry (34.98%) was the main risk factor since there was no one available to support the patient during labour, which resulted in poor labour progress, an increase in caesarean rates (28.70%), instrumental vaginal deliveries (17.04%), and fetal distress (9.87%).

A Ghana study reported, that 98.8% of women received antenatal care services at least once during their recent pregnancy, and 67.9% attended antenatal care at least four times before delivery. However, 61.9% of the women delivered in a health facility with a skilled attendant. The frequently mentioned reason for home delivery was (unaware of onset of labour and delivery) [14]. According to a study in Pakistan's Quetta, the mean age of the control and intervention groups, which was 25+3 years, was roughly equal. When compared to the control group, the mean pain score in the intervention group (7.27+1.06) was substantially lower ( $p=0.038$ ) than the control group's mean pain score (8.21+0.81). The probability of timely breastfeeding initiation was considerably greater among women in the intervention group than among those in the control group ( $p=0.001$ ). Based on the companion's relationship, the amount of discomfort was reduced in an insignificant way. When the companion was the mother of the parturient, the frequency of prompt breastfeeding initiation was considerably greater ( $p=0.02$ ) [15].

According to a study conducted in Nigeria, only 48 (37.5%) of the respondents had adequate knowledge of all the treatments evaluated; respondents knowledge of normal labour and the use of Partograph performed worse. However, 96 (75%) of the respondents felt comfortable using 75% of the skills evaluated. The care in the birth attendants and training in life-saving techniques were two criteria that were strongly linked with having a good grasp of Maternal Neonatal Health skills, according to our study ( $p=0.001$ ) and ( $p=0.001$ , respectively). Our respondents self-rated confidence in having the necessary skills was not substantially correlated with their knowledge of the majority of the Maternal and Neonatal Health therapies evaluated [16]. While in a study reported from Sub-Saharan Africa, 73% of young women gave birth to their first child before becoming 20 years old, with Chad having the highest percentage (85.7%) and Rwanda having the lowest (43.3%). In the 29 sub-Saharan African nations, the average percentage of individ-

uals who had competent assistance during birth was 75.3%, ranging from 38.4% in Chad to 93.7% in Rwanda. When compared to young women who had their first child before the age of 20, those who gave birth between the ages of 20 and 24 had a higher likelihood of skilled birth attendance [17]. While in our local setup 54.26% patients delivered vaginally when they were supported by attendant during active stage of labour.

Sindh Pakistan study reported, 90% of women had a support person with them during labour and delivery. While the standard of care at all facilities, it is even worse at district-level referral facilities than it is at primary healthcare facilities. This is due to the fact that 40% of deliveries during night shifts at referral facilities were handled by dais or helpers who had no formal training in labour, birth, or neonatal care [18]. Study in Bangladesh out of 492 completed interviews, 48% involved home deliveries and 52% involved facilities, with two-thirds of those taking place in private clinics. Sample caesarean rates range from 39% for public hospitals to 53% for private clinics. Pregnancy without complications and access to a dependable birth attendant are mentioned in more than half of the arguments for home births [19]. While in our study, the primary causes of the increased caesarean rate (28.70%), assisted vaginal delivery (17.04%), and foetal distress (9.87%) were the absence of an attendant to help the patient during labour.

Finally, the main limitation of this study was that it was a single centered study and therefore could not worked up on large sample sizes, public and private hospitals have different roles to allow attendants with the patient so as to generalize its results to the overall population.

## 6. Conclusion

In our local setup labouring patients are allowed to be supported by her attendants only during active stage of laboring which results in maternal anxiety followed by need of analgesia, postpartum hemorrhage and fetal distress. The results highlight the fact that primigravida is a risk factor for prolonged first and second stages of labour, increased chances of foetal distress during labour and may need intensive monitoring. Delivery of a primigravida outside hospital premises should be discouraged and women should be counselled for supervised antenatal care in the attendant support at the time of delivery.

## 7. Recommendation

All the labouring patient especially primary gravida and grand multigravida should be delivered in the presence of attendant care during labour in proper hospital setup those having facility of operation theater and nursery to improve the pregnancy outcome and reduce the cesarean section and postpartum complications.

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