

A CLINICAL STUDY OF LABOUR AND OUTCOME IN HUNDRED CASES OF PRIMIGRAVIDA IN DHAKA MEDICAL COLLEGE AND HOSPITAL

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Summary :

Introduction: Primigravida is one, who is pregnant for the first time. A successful well managed vaginal delivery first time around usually leads to subsequent deliveries being relatively uneventful. Conversely, a poorly managed first labour can add to subsequent obstetric problems. Therefore, utmost care and expertise is a predominant factor for a successful delivery.

Aims and objectives: Objectives of this study is to enhance the rate of safer delivery for primigravida through monitoring progress of labour, mode of delivery and fetomaternal outcome.

Methodology: This prospective study was carried out at labour ward in the Department of obstetrics and Gynaecology of Dhaka Medical College & Hospital from January, 2007 to June 2007. Hundred cases of primigravida were selected for this study. Data had been collected through questionnaires.

Results : Largest number of patients (50%) had age group 20-24 years and likely to have normal vaginal delivery. Sixty percent patients had regular antenatal check up. Risk factors like PIH, Breech presentation, Face presentation, Rh negative, Jaundice and Pyrexia were found in 23% cases. About 96% fetuses presented by vertex, among them 52% had non engaged head. Sixty patients came with cervix at or less 3 cm dilated and 40 patients were at cervical dilatation 4 cm or more. Progress of labour was monitored by modified WHO partograph. Sixty two percent patient delivered vaginally, among them 3% patients need instrumental delivery. Thirty eight patients pregnancy were terminated by caesarean section. Ninety nine percent babies were live birth and 1% was still birth.

Conclusion : Safest age group for delivery of primigravida in this study between 20-24 years. So, women should be encouraged to have their 1st child at this age. People should be made aware of the benefits of proper antenatal check up and choosing safest place for delivery.

Key words : Partograph, labour.

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Introduction

Labour and delivery is a complex psychological process causing the expelling of the products of conception from uterus into outside world. This process is characterized by increased frequency, intensity and duration of uterine contraction by progressive effacement and dilatation of cervix and descent of fetus through birth canal.¹ It is fundamentally important to understand that there is an overwhelming

difference between the labour of a primigravida and that of a parous woman who has had a previous vaginal delivery.² Compared to a multigravida, the labour of a primigravida is likely to be longer and more likely to result in both instrumental delivery and neonatal injury. Uterine rupture though rare in a multigravida, virtually never occurs in a primigravida.³ Three fundamental requirements in labour are to ensure that mother is well, fetus is in good

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condition and labour is progressing well.⁴ Progress of labour, mode of delivery and fetomaternal outcome of labour in primigravida depends on various factors such as patient's psychology, education, cultural background, age, height, weight, pelvic adequacy and presence of any complicating factors like PE, Eclampsia, DM, Heart Disease and other medical and surgical condition.⁵ Diagnosis of labour is pivotal to management particularly in the event of a primigravid mother. Therefore, the clinical progress in labour needs to be closely monitored and accordingly be taken care of during its different stages.⁶ In many developing countries like Bangladesh, complications of pregnancy and childbirth are the leading causes of death among women of reproductive age.⁷ Less than one percent of these deaths occur in developed countries, demonstrating that they could be avoided if resources and services were available.⁸ Regrettably, in Bangladesh <10% delivery occur in Hospital whereas giving birth is common for hospital in developed countries. Maternal and perinatal mortality both are high in Bangladesh. Therefore utmost care & expertise is a predominant factor for a successful delivery, particularly for the primigravida.

Aims And Objectives :

- 1) To find out potential reasons that contributes to complication and difficulties of labour in primigravida.
- 2) To adopt preventive measures to ensure safe delivery of primigravida.

Methodology :

This prospective study was carried out at labour ward in the Department of Obstetrics and Gynaecology of Dhaka Medical College Hospital for the period of six months from January, 2007 to June, 2007. Hundred cases of Primigravida with term pregnancy of 37 weeks to 42 weeks with labour pain were admitted from outpatient department and emergency were selected for this study. Multigravida and patients with APH, Eclampsia, IUGR, Heart disease, renal disease, COPD, bleeding disorder were excluded from this study. After taking history with attention to particular aspects relevant to this study, clinical examination was carried out. Labour

was diagnosed on the basis of regular, recurrent painful uterine contractions, cervical dilatation, show and rupture of membrane. A partograph was started when cervical dilatation was 4 cm. Per vaginal examination was done at regular interval. Fetal monitoring was done by auscultation of fetal heart rate with stethoscope and color of liquor.

Results :

Age of patients ranged from 18-34 years having largest numbers of patients (50%) belongs to the age group between 20-24 years, 18-19 years were 25%, 25-28 years were 20% and 29-34 years were 5%. The results also indicate a relationship between age and mode of delivery. Age group 20-24 years had normal vaginal delivery more than age group 29 years and upwards, they need instrumental delivery more. Height of the patient is one of the criteria for diagnosing pelvic adequacy. Majority (62%) of patients were in height group 145-149 cm and 150-154 cm. Most of the patients were weighed between 45 to 54 kg and deliveries were more difficult in patients who weighed more, especially more than 65 kg. Among 100 patients 80% were literate and most of them were house wife. Majority (60%) patients had taken regular antenatal check up and 97% patient were completely immunized against tetanus. Risk factors were found in 23% cases, among them 8% had PIH, 3% had breech presentation, 1% had face presentation, 2% had Rh negative, 1% had jaundice and pyrexia was found in 2% cases. Ninety six percent fetuses presented by vertex and among them 55% had non-engaged head. Duration of labour of different stages were shown in table -

Table I
Distribution of different stages of labour

Stages of labour	Mean	Range
First stage	10	5-15 hrs
Latent phase	6.75	4-12 hrs
Active phase	3.20	3-6 hrs
First stage	22.8	21-24 hrs
Second stage	59.20	30-130 minutes
Third stage	3.50	2-12 minutes

Table - II

Subject	Complication	No. of patients	Percentage
Maternal	Spontaneous delivery-	Total 13	
	1st degree perineal tear	3	
	2nd degree perineal tear	1	
	Vaginal laceration	3	21%
	Cervical tear	2	
	Primary PPH	2	
	Retained placenta	2	
	Complication of ventouse delivery		
	Without complication	1	
	Vaginal wall laceration	1	5%
2nd degree perineal tear	1		
Foetal	AsphyxiaLocal sloughing with ventouseStill born	521	21%

Table - III*Complications of LUCS*

Subject	Complication	No. of Patients	Percentage
Maternal	Preoperative complication		
	Extension of uterine incision	2	
	Primary PPH	3	16%
	Anasthetics Hazards	1	
	Post operative complications		
	2ndary PPH	2	
	Infection	3	26%
	Wound gap	1	
Spinal headche	4		
Foetal	Baby born with asphyxia due to fetal distress	16	42%

Labour abnormalities were identified in 19 patients who crossed 1st stage more than 20 hours and 5 patients crossed 130 minutes in 2nd stage of labour. Among them, 12 patients developed sign of CPD and their pregnancy terminated by caesarean section and remaining 7 patients who showed prolong 1st stage got augmentation by oxytocin drip but their labour was not progressing and mother developed distress. Sixty two percent patients delivered vaginally and out of them only 3% patients needed instrumental delivery and 38% patients needed Caesarean section due to foetal distress

(15), CPD (12), Prolonged labour with maternal distress (6), malpresentation (4,3-breech,1-face), chorioamnionitis (1). Ninety nine babies were live births and 1% was still birth. Seven babies needed NICU and cause of stillbirth was severe foetal distress. Complication of vaginal and caesarean delivery were shown in table -

Discussion :

In this study 63.39% primigravida delivered by normal vaginal delivery with age group of 20-24 years, so safest age group in 20-24 years. Kristensen J, Vestergaard M, Wishborg K. in a

study had suggested that, there is a strong association of maternal obesity and hypertension.⁹ In this study 5 obese patients presented with pregnancy induced hypertension. This study also observes that height has got positive relationship with outcome of labour, more the height more chance of vaginal delivery and less chance of complicated labour and instrumental or surgical intervention. This study found that high percentage (60%) of regular antenatal check up remarkably contributed in minimizing risk of developing complications. Although complications like prolonged labour were more found in non-booked and irregular group. The shorter duration of 2nd stage in few patients in present study possibly due to late diagnosis as vaginal examination was done 4 hourly or when patient had bearing down. A study group at University New Mexico Hospital¹⁰ had shown difference in duration of labour in active management protocol group and control group. Some of the indication for caesarean section were clear and straight forward whereas others were relative. Higher rate of caesarean section in this study due to fetal distress followed by arrest of active phase dilatation. A study in china reported that caesarean rate increased significantly.¹¹ Maternal complications during vaginal delivery was detected from vaginal laceration to 2nd degree perineal tear and only one 2nd degree perineal tear had occurred during ventouse delivery. A prospective observational study on tears during vaginal delivery at Sahlgrenska university Hospital, Sweden found that only 6.6% multiparous had no detectable tear and 16.6% of nulliparous women suffers from a 2nd degree tear during birth.¹² In another study of 319 women of mixed parity, effect of oxytocin augmentation benefited by allowing 48 of 92 women (42%) with unsatisfactory labour progress to achieve safe vaginal delivery.¹³ In our study 55% patients response to oxytocin augmentation and occurred normal vaginal delivery. In 2001 Royal College of Obstetrics and Gynaecology (guide line

No. 20) recommended that “The best method of delivering a term frank or complete singleton Breech is by planned caesarean section.”¹⁴ In this study there were three patients reported

with breech presentation and pregnancy terminated by caesarean section. Severe pain affecting 60-70% nulliparous and 35-40% of multiparous women. One study in randomized clinical trials shown that epidural analgesia prolongs duration of labour¹⁵ and in response to this observed effect recently physician should consider modifying guidelines for management of 1st and 2nd stage of labour. In this study pain relief was managed by using hyosinebutylbromide and pethidine. Wound infection occurs around 16% of patients following caesarean section in another study¹⁶ but in this study it was 10.50%, this is due to prophylactic administration of antibiotic in high risk patients. The report on “situational analysis of obstetrics fistula in Bangladesh” by UNFPA finds that number of women living with fistula is estimated 1.69 per 1000 ever married women.¹⁷ However, in this study no fistula was found because of close monitoring with partograph. Reducing maternal and infant mortality in MDG for Bangladesh¹⁸ in this study among hundred primigravida there had been no maternal death, however, there was one stillbirth baby. This successful rate can be attributed to the advanced care and support available in tertiary hospital (DMCH).

Conclusion :

Women should be encouraged to have their first child at 20-24 years of age with average weight. Education of women needs for the importance of regular antenatal check up that identify high risk cases, choosing safest place of delivery, seek care for complications, so maternal and fetal outcome will be better.

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