ORIGINAL RESEARCH PAPER

Volume-9 | Issue-1 | January-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

COMPARISON OF NORMAL AND ABNORMAL LABOUR BY USING MODIFIED WHO PARTOGRAPH BY THE JUNIOR RESIDENTS AND NPM STAFF POSTED IN LABOUR ROOM.

Obstetrics and Gynecology

Dr Nalini I Anand Department of Obstetrics and Gynecology, Guru Gobind Singh Government Hospital, Jamnagar, Gujarat, India.

Dr Harshitha* Department of Obstetrics and Gynecology, Guru Gobind Singh Government Hospital, Jamnagar, Gujarat, India. *Corresponding Author

ABSTRACT

Objective : The aim of this study was to check the patterns of labour employing a modified WHO Partograph and conjointly to compare the outcomes of labour, maternal and infant outcomes in traditional(normal) and abnormal labour.

Methods : This is a prospective observational hospital based study of two hundred cases coming to GGG Hospital, Jamnagar for delivery throughout the last one year. Progress of labour was assessed using modified WHO Partograph. numerous parameters like period of labour, mode of delivery, maternal and neonatal outcomes were studied.

Results : The average duration of active first stage of labour was five and half hours in normal labour. Arrest of descent was responsible for 33.3% of abnormal labour that occurred in this study. Complications like obstructed labour were avoided by timely intervention in the form of cesarean section and instrumental delivery.

Conclusion : Routine use of modified WHO Partograph helps in early detection of abnormal labour and should be enforced in all institutions and all labour rooms in developing countries where delivery care is being given and especially in places where operative and new born facilities are lacking to facilitate early referral.

KEYWORDS

INTRODUCTION

The greatest impediment to understanding normal labor is recognising its start. The strict definition of labor is: uterine contractions that bring about demonstrable effacement and dilation of the cervix. This does not easily aid the clinician in determining when labor has actually begun, because this diagnosis is confirmed only retrospectively. An orderly and systematic approach to labor management results in reproducible beneficial maternal and perinatal outcomes (Althabe, 2008).[1] A partogram is a graphical representation of progress of labour. Philpott [3] in 1971 designed partogram in Zimbabwe. It has been modified and simplified for use by WHO in 2000 for its use by skilled birth attendants. The availability of this partogram was considered an important advance in modern obstetrics and is applicable to low as well as high resource settings. So a partogram aids for the early diagnosis and management of pathological labour.

Partogram is a pictorial overview of maternal and fetal condition as well as progression of labour. It aids the systematic approach with careful diagnosis, regular assessment and decisive actions like amniotomy, augmentation of labour with oxytocin and caesarean section. Since it is colour coded and simplified, its use in primary health centres by skilled birth attendants is made easy to recognize the labor abnormalities, intervene in necessary situations and refer to higher centres before the mishaps. The Cochrane database in 2009 has recommended the partogram in developing countries.[4]

Present study was carried out to assess the course of normal and abnormal labour, to study various abnormalities of active phase of labour, to evaluate maternal and neonatal outcome in normal and abnormal labour by the junior residents and NPM staff posted in labour room.

METHODS

This Study consisted of 200 patients who were admitted in GGG Hospital, Jamnagar for labour for the last one year. It was a prospective study.

Inclusion criteria

Pregnant women with uncomplicated full term pregnancies (37-40 weeks) with vertex presentation in active phase of labour.

Exclusion criteria

Women with medical comorbidities like anaemia, hypertension, diabetes and immune compromised status.

Women with obstetrical complications like :

- Preterm labour
- Multiple pregnancy
- Antepartum haemorrhage
- Intrauterine growth restriction
- Premature rupture of membranes
- Intrauterine fetal death.

Detailed history regarding age, parity, duration of pregnancy and labour pain was taken from every patient. Examination was done including general physical examination, abdominal examination for fundal height, lie, presentation, engagement, assessing liquor, palpable uterine contraction and fetal heart rate. Pelvic examination was done for pelvic assessment and bishop score. All information were entered in predesigned performa. The progression of labour in all patients were entered on modified WHO partograph. Individual partograph was studied to know the various aspects related to progress of labour and role of partograph in helping decision making in abnormal progress of labour was assessed. The graphs of the patients analysed and were placed in one of the three categories :

Group A : Patients who delivered when partogram was on or before the alert line.

Group B : Patients who delivered when the partogram crossed alert line but not action line.

Group C : Patients who delivered when the partogram crossed action line.

The mode of delivery was ascertained and perinatal outcome analysed by studying condition of baby at birth, APGAR score and neonatal response. Standard statistical tests (chi-square, fisher tests) were used where ever applicable.

RESULTS

Our hospital is a tertiary care hospital. Most of them were booked cases(84%) of the hospital.

Table 1 : Distribution based on labour progression.

Labour progression	No. Of patient	Percentage
Normal	176	88.00
Abnormal	24	12.00
Causes of abnormal (n=24)		
Arrest of descent	8	33.33
Arrest of dilatation	5	20.83
Protracted descent	4	16.67
Protracted dilatation	7	29.17

About 12% of cases had abnormal labour progression. Among the 24 cases, 33.33% were due to arrest of descent, 20.83% were due to arrest of dilatation, 16.67% due to protracted descent and 29.17% were protracted dilatation.

Table 2 : Distribution based on mode of delivery.

Mode of delivery	No. Of patient (n = 200)	Percentage
Vaginal	176	88.00
Instrumental	18	9.00
C section	6	3.00

About 88% of the subjects underwent normal vaginal delivery, 9% had instrumental delivery and 3% were delivered by Caesarean section.

Table 3 : Distribution of cases in relation to their partogram pattern.

Relation to action and alert line	No. Of patient. (n = 200)	Percentage
Group 1 (before alert line)	176	88.00
Group 2 (crossed alert line but not action line)	15	7.50
Group 3 (crossed action line)	9	4.50

Majority of cases before alert line delivered by spontaneous vaginal delivery 176 out of 200 (88%). Cases crossing alert line but not action line were 7.5%. Only 3% of the cases crossed the action line.

Table 4 : Distribution of mode of delivery in relation to alert and action line.

Partogram	Csection/ instrumental delivery		Vaginal delivery		P value
	Nor	%	Nor	%	
Group 1	2	8.33	174	98.86	<0.001
Group 2	13	54.17	2	1.14	
Group 3	9	37.50	0	0	
Total	24	100	176	100	

There was a significant association between mode of delivery and the partograph. Among the patients who required instrumental/Caesarean delivery, 8.33% belonged to Group 1, 54.17% to Group 2 and 37.50% to Group 3. Among normal vaginal delivered cases, 98.86% belonged to Group 1 and only 1.14% to Group 2.

DISCUSSION

- This prospective study was carried out on two hundred term pregnant women who were admitted for labour in the last one year, labour progress and their outcomes were analysed by means of WHO modified partogram at the labour room. There was no significant association of age and parity with the partogram pattern. Majority delivered vaginally (88%) followed by instrumental deliveries (9%) and LSCS (3%).
- Most of the patients were between 21-25years age group, 63% cases are of this age group. This study enclosed 55% of primigravidae while 45% cases are multigravida. The mean length of 1st stage of labour is 5.24 ± 2.27 hours. About 65.50% had duration ≤ 5 hours and 34.50% had duration more than 5 hours. The mean length of second stage of labour was 19.06 ± 4.67 mins. In this study about 10% cases had abnormal maternal outcome. Among these 20 cases, 45% had maternal fever and 11% had wound complication. Out of 24 abnormal labour, 83.3% had abnormal maternal outcome (maternal fever or wound complication), 4% of abnormal labour had normal maternal outcome. Normal labour had no adverse maternal outcome. About 6% of the babies born to the mothers had birth asphyxia, 1.50% had jaundice, 2% had meconium aspiration syndrome and the rest were mother side.There was statistical significant association between labour progression and maternal outcome.(p <0.001). Among cases who had abnormal progression of labour, the abnormal neonatal outcome was 79.17% and among the normal progression of labour all neonates were normal. There was statistical significant relationship between labour progression and neonatal outcome. (p <0.001)
- Majority of the women delivered when partogram was within alert line (Group 1) followed by Group B, when partogram was between alert and action lines and Group C when partogram crossed action line. The Group A delivered spontaneously (98.86%). Instrumental delivery and surgical intervention like LSCS was done when the partogram had crossed alert and action lines. In our study labour abnormalities was seen in Group B & Group C, descent abnormalities(33.3%) were more common than the dilatational abnormalities. This was comparable to Manojkumar,et al study in which arrest of descent (40%) was responsible for abnormal labour. Out of abnormal maternal outcome 11 cases developed wound complications. 83.33% of abnormal partogram had developed abnormal maternal outcome. Average duration of NICU stay was more in cases with abnormal labour. Birth asphyxia (6%) was the major neonatal outcome observed in this particular study. This present study had no any maternal or neonatal death.

CONCLUSION

This study helped us to conclude that abnormal labour patterns can be identified earlier by use of partogram. The difference in outcomes like mode of delivery, length of labour, maternal and neonatal outcome was significant and can be predicted by using partogram. Also maternal and perinatal outcomes can be predicted with use of partogram.

Partogram can be highly effective in reducing complications from prolonged labour for both the mother and the neonate. It is highly useful in settings with poorer access to health care resources. Hence in our country like India where rural population is still predominant, training the nurses, ANM and other staff in primary health centres would help in detecting labour abnormalities earlier and their early referral to tertiary centre. So reutilisation of partogram can play an important role in helping to achieve the Millennium development goals . PARTOGRAM is a simple, economical, time saving and effective tool for the obstetrician to identify vagaries of labour at right time and prevent the consequences. Routine use of partogram should be implemented in all institutions and all labour rooms in India where delivery care is being given. Partogram is an old tool, yet it still remains gold standard even for modern obstetric care.

REFERENCES

1. Williams obstetrics textbook, 25th edition, Cunningham,Levono et al.
2. Friedman EA: Primigravid labor: A graphicostatistical analysis. Obstet Gynecol. 1955:6:567. [PMID: 13272981]
3. Philpott, R.H., and Castle, W.M. Cervicographs in the management of labour in Primigravidae. Int J Gynecol Obstet 1972;79(7):592-98.
4. Lavender T, Hart A, Smyth RM. Effect of partogram use on outcomes for women in spontaneous labour at term. Cochrane Database Syst Rev. 2008;8(4):CD005461