IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 16, Issue 12 Ver. I (Dec. 2017), PP 63-65
www.iosrjournals.org

Study of Partographic Analysis of Labour

*Dr.M.Sandhya Rani[1]m.D,Dr.B.S.V.Sivaranjani[2]m.S.Dgo
[1,2]*Associate Professor*
[1,2]*Department of Obstetrics and Gynaecology, Guntur General Hospital and Medical college, Guntur, Ntruhs, India*
Corresponding author: Dr.M.Sandhya Rani1M.D(OBG)

Abstract: *This is a hospital based prospective randomized study conducted at department of Obstetrics and Gynaecology, Guntur, Andhra Pradesh.*
Objective:*To observe labour patterns, effect of cervical effacement on length of labour ,influence of artificial rupture of membranes, syntocinon and type of dysfunctional labour and their management, to study the duration of labour and also the mode of delivery in relation to station of presenting part in primi and multi gravidae*
Conclusion:*Partogram at one glance clarifies the events of labour, allows early recognition of prolonged labour, enables the obstetrician to identify at risk group of patients. Hence it guides us to interfere in time thereby decreasing the maternal and perinatal morbidity and mortality.*
Keywords: *Partogram, artificial rupture of membranes, syntocinon, dysfunctional labour, at risk groups, primi gravidae, multi gravidae.*

Date of Submission: 22-11-2017 Date of acceptance: 05-12-2017

I. Introduction

Partograph means parturition recorded in a graphical form.The scientific basis in understanding the progress of labour was developed by the historic work of Freidman(1954),who defined the progress of labour by plotting the rate of cervical dilatation against the time and described the sigmoid curve[2].The graphical display of progress of labour forms the basis of composite labour graph devised by Phillpott[5](1972). The 3 important aspects of labour monitored by partograph are 1.fetal well being[4] assessed by :Recording of fetal heart sounds intermittently byPinard's stethoscope or continuously by electronic fetal monitor; moulding of head; caput formation; meconium stained liquor 2.Maternal well being assessed by: Clinical evaluation by recording maternal pulse rate, blood pressure and temperature; maintenance of input , output chart, assessment and counting dehydration and ketoacidosis; examination of urine for ketone bodies and other routine tests like urine for albumin, sugar. 3. Progress of labour[6] assessed by: cervical effacement and dilatation; station and descent of presenting part[3], nature of uterine contractions evaluated clinically by abdominal palpation.

II. Materials And Methods

The present study of partographic analysis of labour was conducted in Government General Hospital, Guntur during the period June 2015-June 2017.The cases selected for the study consisted of 100 primi gravidae and 100 multigravidae in labour.Either direct admissions into labour ward or those who were admitted in antenatal ward are included in the study.All the cases were of term pregnancy of 37-41 completed weeks.Breech and twins were excluded.Only cephalic presentations were considered.In all cases labour had started spontaneously. After initial examination frequency, strength duration of uterine contractions and maternal vital data were recorded. Fetal heart rate was noted once in 15min in 1st stage and once in 5 min in the 2nd stage of labour[1]. Per vaginal examination was done 2 hourly and more frequently as and when indicated. Points entered on partogram were connected by straight lines All the required data were entered in the partograms systematically.

From the partogram , the following were studied:1.Duration of labour in both primi gravidae and multi gravidae with reference to age, parity and socio-economic status.2.Duration of labour with reference to Friedman's curve of labour[7].3. Duration of labour with reference to effacement ,dilatation of cervix, station of presenting part and weight of babies4.Effect of sedation and active intervention on the duration, progress and course of labour.

III. Results And Analysis

The present study of partographic analysis of labour was conducted in 100 primi and 100 multigravidae. The labour pattern was described in all of them was similar to that of Friedman's sigmoid curve,with latent phase, acceleration phase and phase of maximum slope.The deceleration phase could be recognized only in few patients.

Table-1The total number of patients as per age

Total	15-20 years	21-25 years	26-30 years	31-35 years
200	46	74	54	26

60% of cases were below 25 years of age.37% of total cases were between 21-25 years. The above table shows that most of primi gravidae and multi gravidae belongs to younger age group.

Table-2. Presentation and position of the cases studied

Gravida	Vertex presentation					
	LOT	ROT	LOA	ROA	ROP	LOP
Primi	50	18	17	8	5	2
Multi	48	17	15	11	6	3
Total	98	35	32	19	11	5

49% of cases were left occipito transverse position of the 200 cases studied.8% of cases were the posterior positions, encountered in labour.

Table-3. Average duration of 1st and 2nd stages in Primi and Multi

Gravidae	Total duration of Labour	First stage			Second stage
		First stage	latent phase	active phase	
Primi	12.13hrs	11.52 hrs	8.48 hrs	5.42 hrs	41 min
Multi	8.62 hrs	8.14 hrs	5.13 hrs	4.06 hrs	25 min

Table-4 . Percentage distribution of gravidae according to type of intervention

Gravidae	No intervention	ARM	Syntocinon	ARM+Syntocinon	Total cases of intervention
Primi	71	8	6	15	29
Multi	89	2	1	8	11

Table-5. Table showing the cause of intervention in primi and multi

Gravidae	Prolonged Latent phase	protracted active phase	secondary arrest of dilatation	protracted descent	arrest of descent	combined disorders
Primi	6	6	3	4	2	8
Multi	2	2	1	1	-	5

Table-6. The mode of delivery in primi and multi

	Primi	Multi
Total deliveries	100	100
Spontaneous deliveries	65	80
Assisted deliveries(forceps)	25	13
Caesarean section	10	7

IV. Discussion

`Normal labour is the process by which a full term fetus presenting by vertex is expelled by natural effort unaided within a period of 24 hrs. In an effort to evaluate the effects of various factors on the course of labour, a simple reproducible and relatively objective method of recording and comparing progressive changes are made. The major observable events that occur during labour are 1.frequency, intensity and duration of uterine contraction. 2. Descent of fetal presenting part. 3. Cervical effacement and dilatation.

Accelerated labour was advocated in 1950 by Lauros of Athens, who administered small doses of oxytocin along with Pethidine to the patients.O Driscoll 1969 said that obstetrician should become active conductors of labour rather than passive observers.His study focused on relation of ARM to active phase.Cilibis and Hendricks(1968) and Laves(1972) noted the value of amniotomy and said that it accelerated the labour. In the present series, there is a remarkable shortening of duration of labour after amniotomy. Ledger et al (1970) used oxytocin stimulation in patients without abnormal labour graphs. Daftary and Matre (1977) noted that rate of dilatation was faster at the end of latent phase following oxytocin infusion. In the present series syntocinon accelerated labour effectively and also was a powerful agent for combating inertia, oxytocin induction yielded curves which are normal in all respects indicating that oxytocin produces a physiological labour. In the present study, among primi gravidae 65% people had spontaneous vaginal delivery, 25% had

assisted delivery with forceps. Among multi gravidae, 80% had spontaneous vaginal delivery. There were only 13% forceps delivery for prolonged second stage.

V. Conclusion

Labour patterns of 100 Primi gravidae and 100 multi gravidae are studied graphically during the June 2015-June 2017.Average duration of labour corresponds mainly to LOT position. Cervical dilatation-time relationship, expressed graphically yielded considerable information regarding progress of labour. The curve noted was characteristically sigmoid in shape.29% of primi gravidae and 11% of multi gravidae needed intervention. There was a marked diminution in active phase and total duration of 1^{st} and 2^{nd} stage with ARM and Syntocinon. Their beneficial effects on prolonged labour was well marked. All babies had APGAR 8-10 at 1 and 5 mts and no perinatal deaths occurred. Partogram graphically represents the events of labour and recognizes at risk group requiring acceleration of labour, intensive monitoring and probable 2^{nd} stage intervention.

VI. Bibliography

[1]. BASU, J., BUCHMANN, E. and BASU, D. (2009). Role of a second stage partogram in predicting the outcome of normal labour. Australian and New Zealand Journal of Obstetrics and Gynaecology, 49(2), pp.158-161.
[2]. Steen, M. and Roberts, T. (2011). The handbook of midwifery research. Chichester, West Sussex, UK: Wiley-Blackwell.
[3]. Lavender, T., Wallymahmed, A. and Walkinshaw, S. (1999). Managing Labor Using Partograms with Different Action Lines: A Prospective Study of Women's Views. Birth, 26(2), pp.89-96.
[4]. Nolte, A. and Geyer, N. (2008). The partograph and how to assess labour. Cape Town: Juta.
[5]. Albers L L, Schiff M and Gorwoda J G (1996) .The length of active labor in normal pregnancies Obstetrics and Gynaecology 87(3) 355-359
[6]. Kalyanakutty and Rajagopalan. Engaged and unengaged head in primi, graphical appraisal utilizing Friedman's curve. Indian J.Ob&Gy. No.3 Vol.XXIII June 1973.
[7]. Beazley &AsimKurjak Influence of partogram in active management of labour. Lancet vol.2 No.7773 P.34 Aug.19,1972.

*Dr.M.Sandhya Rani1m.D. "Study of Partographic Analysis of Labour." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) , vol. 16, no. 12, 2017, pp. 63–65.