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SIGNIFICANCE OF WHO MODIFIED PARTOGRAPH IN MANAGEMENT OF SPONTANEOUS LABOUR IN PRIMIGRAVIDAS

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Abstract

Introduction: The importance of partogram is to prevent the maternal and perinatal complications. The WHO has simplified the partogram for its use by skilled birth attendants.

Aims and Objectives: To study the progress and outcome of labour using modified WHO partogram in spontaneous labour in primigravidas.

Materials and Methods: A cross sectional study of 100 women primigravidas admitted to Jhalawar Medical College from November 2017 to October 2018 with spontaneous onset of labour at term with no high risk factors were recruited for the study using modified WHO Partogram.

Patients were divided into 3 groups –. Group 1- cervical dilatation and descent curve falling to the left of the alert line. Group 2- cervical dilatation and descent curve falling to the right of the alert line. Group 3 with women to right of action line was planned.

Results: Most women belonged to age group of 21-25 years. The mean gestational age was 38.2 weeks. In Group 1, the mean duration of active phase of first stage of labour was 4.52±0.10 hours, where as it was 5.94±1.46 hours in Group 2. In Group 2, the mean duration of second stage of labour was 45.44±1.94 mins but it was 34.42±16.41mins in Group 1study subjects. Mean rate of cervical dilatation is 1.2 cm/hr. Seventy seven percent had normal delivery, 11% had caesarean delivery and 12% had instrumental delivery. Augmentation was significantly higher in Group 2 (92.3%) than in Group 1 (67.8%). In the study group, there were no maternal and perinatal deaths.

Conclusion: The partograph is an inexpensive and easily accessible tool that can effectively monitor the progress of labour. The WHO simplified partograph is highly useful in identifying when to intervene and also reduces perinatal and maternal mishaps.

Keywords: WHO partogram, Alert line, Maternal outcome, Perinatal outcome

Introduction:

Labour is a natural physiological process characterized by progressive increase in the frequency, intensity and duration of uterine contractions resulting in progressive effacement and dilatation of cervix with the descent of fetal head through the birth canal. But this journey of the fetus through the birth canal can be extremely dangerous leading to morbidity and mortality of both mother and fetus.

Active-labor phase abnormalities are quite common.

Sokol1 and co-workers (1977) reported that 25 percent of nulliparous labors were complicated by active-phase abnormalities, whereas 15 percent of multigravidas developed this problem[1].

Turning back to Friedman2 (1955), the mean duration of active-phase labor in nulliparas was 4.9 hours. The standard deviation of 3.4 hours is quite large. Hence, the active phase was reported to have a statistical maximum of 11.7 hours[2].

Partogram is a graphical representation of progress of labour. Philpott3 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[3].

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[4-7]

The Cochrane database in 2009 has recommended the partogram in developing countries.4

The aim and objective of the study was to analyse the primigravidas with spontaneous labour using WHO modified partogram and study their outcome.

MATERIALS AND METHODS:

A cross sectional study of 100 women primigravidas in Jhalawar Medical College from November 2017 to October 2018 with spontaneous onset of labour at term with no high risk factors using modified WHO Partogram.

Inclusion Criteria

1. Primigravidas
2. Singleton pregnancy
3. Term gestation
4. Vertex presentation

Exclusion criteria

1. Multiple gestation
2. Malpresentations and malpositions
3. Contracted pelvis and major degree CPD
4. Obstetric complications like PIH, GDM, APH
5. Medical disorders in pregnancy

Patients were divided into 3 groups – Group 1, Group 2, and Group 3.

Group 1- cervical dilatation and descent curve falling to the left of the alert line.

Group 2- cervical dilatation and descent curve falling to the right of the alert line.

Group 3 - cervical dilatation and descent curve falling to the right of the action line Requirement of Augmentation, duration of labour, mode of delivery, maternal morbidity and neonatal outcome were studied

RESULTS

One hundred primigravidas in spontaneous onset active labour were analysed using WHO simplified partogram.

Group 1 consisted of 87 patients, group 2 had 13 patients. There were no patients in Group 3.

Augmentation of Labour:

In Group 1, 59(67.8%) patients required augmentation where as 28 patients did not require augmentation.

In Group 2, 12(92.3%) patients required augmentation but 1 patients did not require augmentation.

So the requirement of augmentation in Group 2 was significantly higher (p value<0.05) than Group 1

Table 1: Age distribution

<20	13 (14.9%)	1(11.5%)	14
21-25	54 (62.12%)	9 (69.2%)	63
26-30	16 (18.39%)	2(15.4%)	18
>30	4(4.59%)	1 (3.9%)	5
Total	87	13	100

Table 2: Duration of labour

	Duration of 2nd stage	**Mean ±SD**
Group 1	4.52±0.10	P value<0.001 Highly Significant
Group 2	5.94±1.46	P value<0.001 Highly Significant
	Duration of 2nd stage	**Mean ±SD**
Group 1	34.42±16.41	P value<0.001 Highly Significant
Group 2	45.44±1.94	P value<0.001 Highly Significant

Table 3: Mode of delivery

	Group 1	Group 2	Total
Vaginal (Normal+Ins trumental)	83(95.4%)	6(46.2%)	89(89%)
LSCS	4(4.6%)	7(53.8%)	11(11%)
Total	87	13	100

P value <0.001

Table 4: Indications for LSCS

CPD	2	0
Fetal Distress	1	3
Deep Transverse Arrest	0	2
Protracted Dilatation	0	1
Arrest of Descent	1	1
Total	4	7

Indications for Instrumental Deliveries: Failure of secondary forces and fetal distress were the indications of instrumental deliveries. Instrumental deliveries were conducted in 5 patients in Group 1 and 2 patients in Group 2. 3 cases of fetal distress in Group 1 and 1 cases of fetal distress in Group 2 were the indications of instrumental vaginal deliveries

Perinatal Outcome: There were 3 NICU admissions in Group 1 and 1 NICU admissions in Group 2

The APGARS were good (8-10) in 82 newborns (94.25%) in Group1 and in 11 newborns (84.6%) in Group 2. APGARS <7 was seen in 5 newborns (5.75%) and 2 newborns in Group 1 and Group 2 respectively. However this was not statically significant, p-0.26.

In the study group, there were no maternal and perinatal deaths.

DISCUSSION

- One hundred primigravidas in spontaneous onset active labour were analysed using WHO simplified Partogram.
- Group 1 consisted of 87 patients, group 2 had 13 patients. There were no patients in Group 3.
- In a similar type of study by Lakshmi Devi et al5, 66.5% patients belonged to Group 1, 20% to group 2 and 13.5% to group 3.
- Majority of study subjects belonged to age group of 21-25 years. This is similar to studies Pujar, et al.6
- In our study, Augmentation of labour was required in 92.3% in Group 2 and was significantly higher than Group 1 (67.8%), p value<0.05.
- In a similar type of study by Penumadu KM et al7, augmentation was significantly higher in Group 3(96%) and Group 2 (68.4%) than Group 1 (26.2%).
- In the study, the caesarean section rate was 11%. The instrumental deliveries constituted 12% and the rest 77% were Full term normal deliveries (FTND).
- This is similar to the study by Usha Rani et al8, who has quoted the caesarean rate of 18%. In the WHO study, 78.3% had FTND, 14.7% instrumental deliveries and 5.4% caesarean sections.
- In a study by Sundaravani 9 Caesarean section rate was 24.6% in primigravida and the rate of the instrumental vaginal delivery in primigravida was 4.6%
- The mean duration of first stage and second stage was 4.52 ±0.10hrs, 5.94±1.46hrs and 34.42±16.41 min, 45.44±1.94 min in Group 1 and Group 2 respectively

Labour was completed within 12 hours in all patients. This coincides with the results of the study by Kavya Mendu Penumadu et al,7 who quoted the mean duration of 1st stage of labour was 4.2 hours and 6.4hrs in Group A and Group B respectively and there was no significant difference between the groups regarding second stage of labour.

There were 3 NICU admissions in Group 1 and 1 NICU admissions in Group 2. This was not statistically significant in the study.

In a study by Sureka Tayade, 10 there was significant reduction in neonatal intensive care admissions from 17% in control (non partograph) group to 6% in babies where partograph was used.

CONCLUSION

Maternal and perinatal outcome was better in those who did not cross the alert line. The partograph is an inexpensive and easily accessible tool that can effectively monitor the progress of labour. The WHO simplified partograph is highly useful in identifying when to intervene and also reduces perinatal and maternal complications.

REFERENCES

1. Sokol RJ, Stojkov J, Chik L, et al: Normal and abnormal labor progress: I. A quantitative assessment and survey of the literature. J Reprod Med. 18:47,1977. [PMID: 833800]
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
5. Lakshmidevi, Muralidhar, K. V. Malini, and Vishma H. Shetty. “Partographic Analysis of Spontaneous Labour at Term in Primigravida.” Journal of Obstetrics and Gynaecology of India 62.6 (2012):635–640.
6. Kavitha G. Pujar, Shruthi V. Salian, Sunanda R. Kulkarni. Partographic analysis of labour by modified who partograph in primigravidae: a prospective observational study. Int J Reprod Contracept Obstet Gynecol. 2016;5(1):166-169.
7. Role of partogram in the management of spontaneous labour in primigravida and multigravidas. Penumadu KM, Hariharan International Journal of Reproduction, Contraception, Obstetrics and Gynecology,. Int J Reprod Contracept Obstet Gynecol. 2014;3(4):1043-1049.
8. Usha Rani, B Vijaya Laxmi. Effect of partographic monitoring on outcomes for women in spontaneous labour at term. IAIM, 2016; 3(7):314-320.
9. Sundaravani C, Nesam Susanna Minnalkodi Comparitive Analytical Study of Role of Partograph in Primigravida versus Multigravida. International Journal of Scientific Research, 2015;4(12).
10. Surekha Tayade. The impact of modified WHO Partogram on Maternal and Perinatal Outcome. International Journal of Biomedical and Advance Research IJBAR. 2012;03(04).