Review Article

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Partogram of the World Health Organization Adapted for a Maternity with Usual Risk

Abstract

Objective: Build/adapt a partogram proposal to be used as a complementary tool in assisting women in labor in a maternity hospital at high risk; study and demonstrate the importance of the partogram and the facilities indicated by it in making immediate decisions and preventing complications for the parturient woman and the newborn in labor.

Literature review: Methodological study which involves the development, validation and evaluation of research tools and methods. In this study, studies were carried out on the partograph and construction of a proposal which will be implemented later.

Results and discussion: This partograph-type instrument was constructed based on the model proposed by the World Health Organization and contemporary patterns of labor progression proposed by Zhang.

Final considerations: The partograph is a graphic representation of labor that analyzes cervical dilation in relation to the time of progression and fetal descent. It is a tool recommended by the World Health Organization to assist in maternal fetal assessment and monitoring during labor childbirth. The benefits of this study contribute to greater safety for health professionals who work in maternity wards and improvements in care. They will be able to use the partogram, following the recommended conduct.

Keyword: Partogram • Assistance to women in labor • Obstetrics • Nursing • Humanization of assistance

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Introduction

Labor and birth were seen and conducted as a natural event, where women were believed to be the protagonists of the pregnancy-puerperal process, most of the time being assisted by midwives in the woman's home. Over the years and advances in medicine, there has been a significant increase in interventions in the labor process, focusing attention on the doctor and viewing childbirth as a pathological event, harming the woman's autonomy and protagonism [1].

From this, with the aim of improving assistance to women and offering care based on the principles of the Unified Health System (SUS), the Ministry of Health (MS) established in 2011, the Cegonha network, which is based on humanization in the process of labor and birth assistance and also encouraging the insertion of obstetric nurses in normal birth centers, enabling them to assist in vaginal births without dystocia, based on scientific evidence that demonstrates the benefits of birth assistance provided by obstetric nurses and the satisfaction of women and families [2].

The partogram consists of a graphic representation of labor and involves recording cervical dilation and descent of the fetal presentation in relation to time. The first model appeared in 1954, proposed by Friedman and designed by Philpott and Castle in 1972, where two lines called alert and action were determined. The warning line drawn at the beginning of the active phase and the action line drawn parallel to the first line after a period of 4 hours. These lines aimed to

identify the evolution of labor and differentiate between eutocic and dystocic labor [3].

Subsequently, in 2010, a group of researchers led by Zhang carried out a study and proposed a new contemporary model of the partogram for nulliparous women, suggesting that cervical dilation of 6 cm be used to start the active phase of labor instead of 4cm as proposed by Friedman [4].

Furthermore, in February 2018, the World Health Organization (WHO) launched a guide of recommendations on intrapartum care for a positive birth experience, with the aim of guiding care through evidence-based practices, avoiding ineffective interventions and practices and many sometimes harmful to the labor process.

Based on this, the WHO revised the previous partograph model and published a new model with a view to facilitating the implementation of the recommendations published in 2018, thus providing monitoring of maternal-fetal well-being during labor, stimulating decision-making shared between health professionals and women, with evidence-based central care for women [5].

Research shows that the information obtained from the partogram guides assistance during labor and helps identify measures when necessary. Therefore, the importance of using this tool in a complementary way in care is highlighted, aiming to assist physiological labor and reduce unnecessary interventions [6].

The interest in developing this research is justified based on the experience of nurses resident in obstetrics working in a usual-risk maternity hospital in a 100% SUS hospital located in the interior of the state of Rio Grande do Sul. In this maternity hospital, diverse behaviors were observed, which made it difficult to standardize care during labor.

Thus, the objective was to adapt a partogram proposal to be used as a complementary tool in assisting women in labor in a usual risk maternity hospital. It is noteworthy that this partograph-type instrument was constructed based on the model proposed by the World Health Organization and contemporary patterns of labor progression proposed by Zhang. The aim was also to study and demonstrate the importance of the partograph and the facilities indicated by it in making immediate decisions and preventing complications for the parturient and the newborn during labor.

Literature Review

This is a methodological study which involves the development, validation and evaluation of research tools and methods. The increase in demands related to new technologies, as well as behaviors that are everyday tools in health services, have contributed to the increase in methodological research. This is evidenced by the contributions offered by innovating behaviors and validating their effectiveness and operability. In addition, they also cover the validation and evaluation of research tools and methods [7].

In this methodological research, a partogram-type instrument proposed by the World Health Organization was adapted as a complement to assist women in labor in a usual-risk maternity hospital, based on contemporary labor patterns proposed by Zhang.

This research involved the participation of professionals who work in the aforementioned maternity ward, as they mentioned the need to implement the partogram. It should be noted that the first two stages were implemented, that is, the first stage consisted of studies and discussions regarding the partogram and the second stage highlighted the potential and safety that the partogram provides in the obstetric work journey. The remaining stages of implementation, evaluation and adjustments will be carried out later, according to the work routine. Two obstetrician gynecologists, a resident nurse and four obstetric nurses who work in the aforementioned maternity ward participated in the research. Greater adherence was noticed in the conversations and activities proposed by obstetric nurses and residents.

In the first stage, an informal conversation was held with the professionals who were on duty about the use of the partogram and what adaptations could be made to the instrument proposed by the WHO for its use in the maternity ward. It was also suggested to read the labor care guide: user's manual, material made available by the WHO that guides the use of the new proposed model.

The setting for implementing this study was the Santa Isabel obstetric hospitalization unit, part of the Casa de Saúde Hospital, which is of medium complexity and serves 100% SUS, being a reference for the 33 municipalities that make up the 4th Regional Health Coordination-CRE/RS, with an estimated population of more than two million and five hundred thousand people.

In the area of obstetrics, it is aimed at caring for high-risk pregnant women. Better characterizing the study site, it is an Obstetric Inpatient Unit with 22 beds, 2 pre-delivery, childbirth and postpartum (PPP) rooms, 1 assessment room, 1 risk classification room, 1 post care, 1 nursery that contains two heated cribs, within the obstetric center it has 1 operating room, 1 delivery or minor procedure room, 1 recovery room with two beds post-surgical observation.

Results and Discussion

The study was developed from August to December 2023. Initially, the documents were translated into Portuguese and from then on, a proposal adapted to the reality of the scenario of this study was created.

During the construction/adaptation of the proposal, some ideas were obtained suggested by obstetrician-gynecologists and obstetric nursing residents who work in the maternity ward. During the meetings, an individual presentation and explanation was carried out on how to fill out the partogram and it was also suggested to watch the class entitled: Updates on the partogram made available by Fiocruz in July 2023. The methodological step by step that led to achieving the proposed objective is described below.

The partograph instrument proposed by the World Health Organization was presented, which was adapted, taking into account the service routine and the suggestions of the obstetric nurses who work in the aforementioned maternity ward.

The partogram is a clinical tool that emerged in 1954 from a study carried out by Emanuel Friedman, who analyzed the progression of labor in primiparous women and noticed a relationship between the duration of labor and cervical dilation, thus building a sigmoid curve that divided the phases of labor into latent and active. In this study, Friedman defined the latent phase as the initial phase of labor and the active phase as starting at 3-4 cm of dilation, evolving at 1cm/hour until complete dilation, thus, labors that did not progress at 1 cm/hour after the start of the active phase they are considered to have "abnormal" progression. The findings in Friedman's study began to influence obstetric practices ever since [8].

Furthermore, in 1972, Philpott and Castle developed a partogram based on Friedman's findings, adding a warning line that corresponded to a change in the average rate of cervical dilation, representing a progress rate of 1 cm/hour. If the progression of labor progressed more slowly, exceeding this warning line, the parturient should be transferred to the hospital. Furthermore, they also added an action line to the right and a four-hour alert line that aimed to identify possible deviations in progress and the use of interventions to correct them (amniotomy and/or oxytocin).

However, sociodemographic conditions have undergone changes over the years, bringing other characteristics and factors that influence the pregnancy-puerperal process. In view of this, Zhang conducted a multicenter retrospective observational study that used detailed information on labor and delivery from records at 12 clinical centers in the USA from 2002 to 2008. 62,415 parturients were selected and constructed average labor curves by parity from data analysis.

Therefore, the objective of Zhang's work was to estimate the duration and describe the patterns of labor without comparing the study groups, therefore, no statistical tests were carried out. It is important to highlight that Zhang analyzed primiparous women, with spontaneous onset of labor with cephalic presentation and normal maternal and neonatal outcomes after vaginal birth.

The results of the study showed that labor can take more than 6 hours to progress dilation from 4 cm to 5 cm and more than 3 hours to progress from 5 cm to 6 cm of dilation, and before 6 cm, nulliparous and multiparous women seem to progress in similar rhythm. After 6 cm dilation, multiparous women progressed faster than nulliparous women. Furthermore, it became clear that there are a number of parturients who may not present a consistent pattern in the active phase, particularly nulliparous women, who have gradual progression, but with a vaginal birth outcome.

From this, Zhang produced a partogram for contemporary nulliparous women and suggests that in the contemporary population, 6cm dilation should be used instead of 4 cm for the beginning of the active phase of labor and that cervical dilation often accelerates as labor progresses.

In 2020, the WHO launched a new partogram proposal, aiming at individualized care based on scientific evidence. Therefore, it is not recommended to use the alert line or adopt a

dilation of 1 cm/hour to assess normal progression of labor or as a routine indication for intervention. Furthermore, a column was added to record the beginning of the second stage of labor and space to record observations such as: Whether the woman in labor has a companion, support and free movement. Thus, the new WHO partogram model aims to assist in care as a complementary instrument in monitoring maternal-fetal well-being during labor and contributes to reducing unnecessary interventions. Furthermore, it encourages the adoption of good practices and shared care with the parturient woman and her family. The adapted Partogram appears in Appendix A of this study.

Conclusion

The benefits of this study are indisputable, which will provide more security to health professionals who work in maternity wards. They will be able to use the partogram, following the conduct recommended by the WHO, regarding monitoring care for the health conditions of the parturient woman and her fetus.

The partogram-type instrument also enhances the results of the work of the health team, including nursing technicians, nurses, obstetrics resident nurses and doctors, who, during the completion of the partogram, will be able to genuinely discuss the conduct to be carried out. be followed, thus resulting in a model of childbirth care that shares care among the multidisciplinary team.

Performing the partogram effectively can also directly and indirectly affect the outcomes of newborn births, as well as the health conditions of mothers and their babies. When the instrument is used to complement assistance, it provides qualification and reflection on the care offered.

References

1. Gama SG, Viellas EF, Medina ET *et a*l. Delivery care by obstetric nurses in maternity hospitals linked to the Rede Cegonha, Brazil-2017. *Cien Saude Colet*. 26, 919-929 (2021).
2. Morais BS. The partogram as an instrument for analyzing childbirth care: A bibliographical review and criticism of its contemporary use. (2021).
3. Zhang J, Landy HJ, Branch DW *et al*. Contemporary patterns of spontaneous labor with normal neonatal outcomes. *Obstet Gynecol*. 116, 1281-1287 (2010).
4. World Health Organization. WHO labour care guide: user's manual. (2020).
5. Medeiros AB. Partogram: safety instrument in multidisciplinary care. (2020).
6. Polit DF, Hungler BP. Fundamentals of nursing research. (2024).
7. Lavender T, Cuthbert A, Smyth RM. Effect of partograph use on outcomes for women in spontaneous labour at term and their babies. *Cochrane Database Syst Rev*. (2018).
8. World Health Organization. WHO recommendations on intrapartum care for a positive childbirth experience. (2018).