Analysis of partogram completion as good obstetric practice in the monitoring of labor

Análise do preenchimento do partograma como boa prática obstétrica na monitorização do trabalho de parto

Análisis del llenado del partograma como buena práctica obstétrica en la monitorización del trabajo de parto

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ABSTRACT

Objective: Analyzing the partograph filling performed by professionals who provide assistance to the labor in a teaching hospital that is a maternal and child healthcare reference in the Vale do São Francisco.

Methods: This is a descriptive, retrospective and transversal study with a quantitative approach. There were analyzed 191 medical records of assisted mothers in the institution during the year 2015. The data were analyzed in SPSS program version 20. Results: The results showed that only 40.6% of patient records had a record of parturition, and the analysis of the variables verified at the time of the start of the partogram identified that 99.5% of the records were started in the active phase of labor. Despite of a good record in the start of partograph, the data show that the process of monitoring of labor is still not very effective, because 59.2% of the partographs had only a single record. Conclusion: The use of partograph as a good obstetric practice is still little used in this maternity, it is necessary to consider the partogram registration as a tool in the monitoring of labor to promote adequate assistance as it is recommended by the Brazilian Ministry of Health.

Descriptors: Parturition, Labor, Humanized childbirth, Nursing.

RESUMO

Objetivo: Analisar o preenchimento do partograma realizado por profissionais que prestam assistência ao trabalho de parto em um hospital escola referência materninfantil do Vale do São Francisco. Método: Trata-se de um estudo descritivo, documental, retrospectivo e transversal de abordagem quantitativa realizado com os prontuários de parturientes assistidas na Instituição em 2015. Os dados foram analisados no SPSS versão 20. Resultados: Mostraram que apenas 40,6% dos...
A utilização do partograma: um estudo descriptivo documental, retrospectivo

INTRODUCTION

Labor and delivery assistance are still characterized by strong medicalization and unnecessary obstetric practices, such as high rates of cesarean sections, in addition to the violation of the humanization and autonomy of the pregnant woman, which contributes to the increase in complications maternal and neonatal. This assistance model sometimes ends up leaving aside practices that should be stimulated and that are useful during labor and delivery, such as the use of partogram.1-3

In 1986, this instrument was published in the Appropriate Technology Following Birth, as a quality reference for assistance to the woman patient, showing the obstetric pathway complications, which restricts interventions during labor. It was Emanuel Friedman who, in 1951, observed the evolution of labor in primiparous women and analyzed the relationship between labor time and cervical dilatation. Friedman relied on an extensive study of uterine cervix dilation in labor, establishing a standard curve of normality that is accepted today and concluded that this relationship graphically described a curve that had its own characteristics.2

Therefore, the World Health Organization (WHO), in a practical guide to safe motherhood, provides guidance on obstetric practices that should be used during childbirth care and classified into four categories:

• Category A - Practices demonstrably useful and to be encouraged;
• Category B - Practices that are either clearly harmful or ineffective and should be eliminated;
• Category C - Practices for which there is insufficient evidence to support a clear recommendation and should be used with caution until more research clarifies the issue;
• Category D - Practices that are often misused.4

Among the useful practices that should be stimulated is the careful monitoring of the progress of labor through the use of the partogram, as this is a true graph of the evolution of labor. The use of this tool should be part of the follow-up of the parturient in the active phase of labor, since its use contributes to adequate care. Furthermore, it may indicate deviations in the progress of labor, allowing adequate intervention to be performed and, thus, constitutes an important tool in maternal and fetal care.5-7

Although it is highly encouraged through public policies for maternal and neonatal health care, this instrument, recognized and appropriate, is still partially or totally absent from medical records, even though the Ministry of Health recommends it. A study carried out by Ponce et al.8 showed that although the partogram is low cost and effective to follow the evolution of labor, the professionals still have a low level of knowledge about its use, and may lead to unnecessary interventions in the parturient because there is no record monitoring of labor by completing the partogram.

The use of the partogram is still low in maternity wards, and when used, its items are not fully filled, which shows the need for effective qualification and sensitization measures of the professionals who follow the labor so that they realize the importance the use of this instrument. Hence, the correct completion of the partogram is incontestable as a reference of quality of assistance to the parturient.9

Given the aforementioned, this study aimed to evaluate the completion of the partogram by professionals who provide assistance to labor in a maternity school in the Vale do São Francisco, Pernambuco State.

METHODS

It is a cross-sectional, retrospective, and documental study with a quantitative approach that was carried out in a referral School Hospital for maternal and child care in the Vale do São Francisco region.

The Hospital Unit is the only referral center for high obstetric and neonatal complexity of the Interstate Health Care Network of the Middle São Francisco, which gathers 53 municipalities in both Pernambuco and Bahia States, reaching a population of about 2 million inhabitants. Despite the high-risk classification, this institution attends parturients of habitual risk. It attends approximately 620 prontuários tinham registro de abertura do partograma. Análise das variáveis verificadas no momento da abertura do partograma permitiu identificar que 99,5% foram iniciados na fase ativa do trabalho de parto. Apesar de um bom registro na sua abertura, os dados mostram que o processo de monitoramento do trabalho de parto ainda é pouco eficaz, pois 59,2% tiveram apenas um único registro. Conclusão: A utilização do partograma como uma boa prática obstétrica ainda é pouco utilizada nesta maternidade; faz-se necessário considerar seu registro como uma ferramenta no monitoramento do trabalho de parto para promover uma assistência adequada como recomenda o Ministério da Saúde.

Descritores: Parto, Trabalho de parto, Parto humanizado, Enfermagem.

RESUMEN

Objetivo: Analizar el llenado del partograma realizado por profesionales que prestan asistencia al trabajo de parto en un hospital escolar referencia materno-infantil del Valle del São Francisco.

Métodos: Se trata de un estudio descriptivo documental, retrospectivo y transversal de abordaje cuantitativo realizado por medio del análisis de 191 prontuarios de parturientas asistidas en la Institución en el año 2015. Los datos fueron analizados en el SPSS versión 20. Resultados: Mostraron que sólo 40. El 6% de los prontuarios tenían registro de apertura del partograma, el análisis de las variables verificadas en el momento de la apertura del partograma permitió identificar que el 99,5% se inició en la fase activa del trabajo de parto. A pesar de un buen registro en su apertura, los datos muestran que el proceso de monitoreo del trabajo de parto aún es poco eficaz, pues el 59,2% tuvo apenas un solo registro. Conclusion: la utilización del partograma como una buena práctica obstétrica todavía es poco utilizada en esta maternidad, se hace necesario considerar su registro como una herramienta en el monitoreo del trabajo de parto para promover una asistencia adecuada como recomienda el Ministerio de Salud.

Descritores: Parto, Trabajo de parto, Parto humanizado, Enfermería.
deliveries performed by doctors and nurses, according to the risk of gestation and 1,400 appointments in obstetric emergencies monthly.

Data collection was performed through the application of an instrument elaborated based on WHO recommendations regarding the completion of the partogram, where data were extracted from the woman's chart. The instrument was composed of the following variables analyzed at the time of parturition and labor monitoring: parturient identification, cervical dilatation, presentation height, position variety, alert line, action line, start date, real-time, recording time, heart rate, uterine dynamics, bag conditions, amniotic fluid appearance, use of oxytocin, medication and signature of the professional.

The records of parturients with delivery performed in the year 2015 and registry of use of the partogram in the monitoring of labor in the system of the Epidemiology Center of the Institution were considered eligible. The exclusion criteria were: records of women who had been delivered to the maternity ward during the period of labor, since in these cases it may not be appropriate to fill out the records and the records that were not available or found in the files during data collection.

The sample size was calculated based on a study carried out in maternity reference schools where 42% of the frequency of use of the partogram was observed. Based on this study's data, the sample size was calculated with a proportion of 42%, absolute precision of 7% and a level of significance of 5%, reaching a total of 191 medical records. This calculation was obtained using the estimation of a proportion referring to the population of interest.

The data were analyzed in the Statistical Package for Social Science (SPSS), Portuguese language model (version 20) and descriptive statistics were used to calculate the absolute frequency and percentage of each variable. Moreover, they were transferred to the program Microsoft Excel for generation of the graphs and for Word for the elaboration of the tables.

The study project was approved by the Research Ethics Committee from the Universidade Federal do Vale do São Francisco under protocol No. 1.704.527, according to the Resolution No. 466/2012 of the National Health Council.

RESULTS

According to data from the Center for Hospital Epidemiology of the service, the number of births performed in this unit in 2015 was 6,843 childbirths, of which 3,913 (57.1%) were vaginally, but only 40.6% were opened or initiated the partogram during hospitalization.

Considering the registry of the completion of the variables studied in relation to the identification and obstetric history of the patients in the instrument, it was possible to observe that in the majority of the partograms analyzed, 187 (97.9%), the identification of the parturient was filled, considering for this, only the patient's name.

When we referred to parity and gestational age there were records in 84 (45%) and 62 (32.5%), respectively.

The data collected in analysis of the registration of the completion of the partograms allowed to verify, in what concerns to the items that are possible to be analyzed during the vaginal touch in the first registry or the opening of the tool, that in 190 (99.5%) of these, the dilation cervical was correctly recorded, while the filling of the presentation height was verified in 158 (82.7%) and the registration of the position variety occurred in only 9 (4.7%) of the partograms analyzed. It was also possible to observe that 99.5% of the partograms were opened at the correct moment, in the active phase of labor. In the others, 1 (0.5%), it was not possible to identify the phase of the clinical course of labor due to absence of cervical dilatation in the partogram completion.

Also related to the variables observed at the opening of the partogram, the presence of the alert line could be verified in 173 (90.6%) of them, while the line of action was registered in 170 (89%), being correctly opened 4 h after the line of alertness in all analyzed. The starting day, the real time and the time of registration had their registration filled in 143 (74.9%), 185 (96.9%) and 178 (93.2%), respectively.

Considering the fetal heart rate, it was found that in 190 (99.5%) there was registration in the partogram, the uterine dynamics was filed in all the partograms analyzed 191 (100%) and the conditions of the bag, classified as an integral bag or was present in 189 (99%) of the partograms.

The use of oxytocin and medication/ fluid/anesthesia was filled in 173 (90.4%) and 4 (2.1%), respectively. The signature of the examiner was recorded in 190 (99.5%) of the analyzed instruments, which allows the identification of the professional responsible for filling in.

Observing the appearance of the amniotic fluid, generally identified and recorded in patients with a ruptured amniotic sac, which corresponded to the majority of the cases observed at the time of opening of the instrument, 120 (62.8%) were found to have been registered (56%), 13 (6.8%) were not registered and 71 (37.2%) were amniotic sacs in normal conditions.

Considering the analysis of the partogram filling and its monitoring of labor, the cervical dilatation records from the beginning to the end of the instrument were evaluated, considering all the evolution of labor recorded in partogram. The data allowed to observe that of the partograms studied during all the evaluations registered in the partogram, the cervical dilatation was registered only once in 113 (59.2%). It was also possible to verify that in 65 (34%) of the instruments studied, records were recorded, with an interval of only one hour, that in only 12 (6.3) the records had intervals of 2 h between one evaluation and another and in 1 (0.5%), the partogram was opened without showing a dilatation evidence.

For the analytical criterion of the monitoring of labor, the registration number of the height of the presentation was evaluated in relation to the dilation recorded in the same instrument, since when performing the vaginal touch
it is possible to identify, at the same time, the cervical dilatation and the height of the presentation, important criteria in the identification of labor complications.

This analysis showed that 94 (49.2%) had a record of height, when compared to the registry dilatation, it was observed that there was a difference of (9.94%), 57 (29.8%) had records followed in professional evaluation when compared to dilatation, there was a ratio of (4.2%), only 7 (3.7) had records with intervals and in relation to dilatation (2.6%) and 33 (17.3%) had no record when compared to dilatation record.

In the analysis of professionals who completed the opening of the instrument, it was observed that 120 (62.8%) were nurses, 53 (27.7%) were physicians, 17 (8.9%) could not be identified because showed only rubric and 1 (0.5%) did not sign at all.

DISCUSSION

The use of the partogram in monitoring labor improves parturient care and prevents unnecessary interventions from taking place. Therefore, the partogram use and its correct completion should be a maternity practice, as recommended by WHO good practices. Nonetheless, it was observed in the present study that the partogram was filled in only 40.6% of the normal deliveries attended. A study carried out at a maternity hospital in Recife city confirms the result found, showing even more worrying data, where the use of the partogram reaches only 28%.10

In a study carried out in maternity hospitals in Brazil, it was shown that the use of the partogram was used in 41.4% of the women in labor; when it brings them to the regions, shows that the North, Northeast and Central-West regions present lower frequency of use rates, equal to 20.7%, 30.4% and 32%, respectively.\(^{7}\) Here, the frequency of use of the partogram in the unit studied corroborates with the figures found in the study at national level, being above the average of the Northeast region of the country.

Another study carried out in a maternity hospital in Rio Grande do Sul State showed that only 29.7% of parturients had parturition completed.\(^{11}\) In Alagoas State, 42% used the partogram in the monitoring of labor. This important practice for follow-up of the evolution of the parturient is still little used in our maternity hospitals, even in those that are maternity schools and that are part of the “child-friendly hospital”, which should welcome good practices and make routines in the environment of work.\(^{8}\)

The use of the partogram aims to accompany labor of the parturient through the graphic representation of labor, through a line of alert at the beginning of the active phase of labor and another line four hours later, characterized as an action line.\(^{12}\) In the service where the study was carried out, it was possible to observe that in most of the partograms there was only the opening record of this instrument, being the woman throughout the evolution of her labor without registered evaluations.

This instrument was developed to contribute to the monitoring and facilitate the visualization of the evolution of labor so as to characterize it in eutocic and dystocic delivery, considering that it has several variables to be analyzed, such as cervical dilatation, presentation height, variety of position, fetal heart rate, uterine dynamics, among others. Thus, studies have demonstrated the value of the partogram for both diagnosis of labor changes and for timely interventions, always prioritizing fetal well-being.\(^{13}\)

Bearing this in mind, it is perceived that in order to open the partogram it is necessary that the laboring woman is in the active phase of labor, which for WHO occurs with cervical dilatation 3-4 cm plus two, three or more effective contractions, or these should be the primary items and should be filled out in all partograms used to monitor labor.\(^{4}\) In line with the criteria for opening the partogram, this study showed that 99.5% of the partograms analyzed were opened during the active phase of the labor.

The results of the analysis of the variables at the time of opening the partogram compared to the data presented by a study carried out in Alagoas State diverge regarding the variables with the highest index of completion. In Alagoas State, the most common items of the partogram were the condition of the pouch (61%), identification of the pregnant woman (72%) and real time (93.06%).\(^{9}\) The present study shows that the variables with the highest fill index were cervical dilatation, pocket conditions, and the examiner’s signature.

The professional who provides assistance to these women should be especially attentive to the evaluation of fetal auscultation and uterine dynamics, not requiring successive touches, since they are uncomfortable and do not bring benefits to the woman patient. Regarding these variables, the study presents a high percentage of registry.\(^{14}\)

It has recently been shown that the pattern of labor progression is different, which may define a prolonged active phase or other disturbances. Thus, some characteristics should be considered, such as parity, pocket conditions, cervical dilatation, declining presentation, frequency of contractions and use of fluid medications so that misdiagnoses and unnecessary behaviors are not performed.\(^{15}\)

A survey conducted in US hospitals with 62,415 parturients demonstrated that labor can take more than six hours to progress from four to five centimeters and more than three hours to advance from five to six centimeters of dilation and that multiparous women and nulliparas seemed to progress at a similar rate before the six centimeters of dilation. However, after six centimeters the multiparous women evolved faster. It may be evident that the conducts taken in labor of multiparous may be distinct from nulliparous, since they present a different evolution in labor.\(^{16}\)

This study pointed out that among the partograms that presented more than one record during all labor
progression (34%) of the parturients had records followed by vaginal touches and only (6.3%) had records with intervals of 2h between the evaluations. In a study involving 150 parturients it was observed that there is no difference in the evolution of labor when the number of vaginal touches is successive. Thus, there was no change when the routine of vaginal touches was 2/2h or 4/4h.\(^\text{17}\) Consequently, the active phase of labor for the opening of the partogram should be well characterized to reduce the risks of instrumented deliveries, cesarean deliveries, and perinatal mortality.

In a study carried out in the Netherlands, 41.7% of women reported having been examined more frequently than recommended by the new guidelines, which would be every two to four hours.\(^\text{18}\) Another study in Scotland showed that the main reason for the vaginal touch is to evaluate the progression of labor as well as the beginning of it. Nonetheless, the parturients report a negative experience regarding the examination, report discomfort, pain, embarrassment and difficulty to relax.\(^\text{19}\)

If clinical intervention is required during the course of labor, it will become safer when the procedure is based on partogram recording data. The professionals who provide assistance to the parturient have the task to recognize situations that require specialized interventions, then minimizing maternal and fetal diseases.

**CONCLUSIONS**

In order to complete and correctly record the partogram, it is necessary, in addition to be familiar with the instrument, knowing about the diagnosis, mechanism and clinical course of labor and delivery by the professionals. These expertises were observed in the analysis of the medical records, which showed a correct and adequate filling of most of the studied variables. Nevertheless, the purpose, the goal and the importance of this is still a setback regarding the partogram usage, which requires continuity and constant monitoring to ensure safe and effective care.

Although good practices have been recommended by the WHO for two decades, it was possible to verify in this study that the partogram filling is still little accomplished and when completed there was only one evaluation. This shows that the adherence of professionals who provide care for vaginal delivery is still insufficient to transform the interventionist model of obstetric care, which may be associated with the fact that obstetric care has always been very related to medicine and this often shows evidence-based practices.

Therefore, the results indicate that complementary strategies should be sought to achieve better performance in relation to the spread of good practice, in particular the use of the partogram, in order to obtain free obstetric care or with minimal intervention. Hence, the professionals who accompany the laboring woman during labor need to be sensitized so that they can realize the importance of the use and begin to perform the partogram filling, so that there is a better monitoring and facility of graphical follow-up regarding the monitoring in obstetric labor.

**REFERENCES**


