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Original Research Article

Is partograph being correctly filled or just giving false security?

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Abstract

Context: Retrospective study was carried out to answer whether or not the partographs that are used to monitor mothers in labour are recorded to the standard. A fuller understanding of this process will be important to educate further the personnel filling the partograph and also to make policies and strategies in the provision of maternity care services.
Objectives: 1) To determine whether the partographs are correctly being filled. 2) To find out which part of the partograph is not being properly filled.
Methods: 100 case records of women delivered in Kasturba Hospital and monitored by partograph, were randomly selected from a period of January – May 2015 (20 records per month) and retrospectively studied by a team of 2 assessors. After defining inclusion and exclusion criteria, data was collected through a pre-tested and structured checklist which was developed, after reviewing literature relevant to the problem under study and standard protocols were defined to identify correctly filled partographs and substandard ones.
Results: Overall 69 % of the partographs were correctly filled. Fetal heart rate was recorded up to the recommended standard in 78(78%) of the partographs reviewed. In 20 (20%) moulding of fetal head was not recorded at all. The status of membranes was recorded in 78 (78%). Cervical dilatation was recorded in 96 (96%) of the partographs however, 9(9%) of these records were substandard while it was not recorded in 4(4%). Uterine contraction was not recorded in 10 (10 %) while recorded to the standard in 71(71%). Descent of the presenting part was not recorded in 49(49%). 90 (90%) women had their blood pressure monitored. Post delivery baby notes were recorded in 96 (96%) of the partographs.
Conclusion: The present study revealed significant proportions of substandard and unrecorded parameters of labour on the modified WHO partograph. This indicates poor documentation, and perhaps monitoring and supervision of labour. Lack and suboptimal documentation of some parameters of the progress of labour could hinder early detection of complications, important to prevent maternal and perinatal mortality and morbidity. Pre-service and periodic on-job training of health workers on the completion of the partograph, regular supportive supervision, provision of guidelines and mandatory health facility policy are recommended.
Keywords: Partograph, descent, moulding, perinatal mortality.

1. Introduction

The partograph is a simple tool designed to provide a continuous pictorial overview of labour and has been shown to improve outcomes when used to monitor and manage labour. It provides health professionals to allow early identification and diagnosis of the pathological labour [1]. It is a single sheet of paper which includes information about the fetal condition, progress of labour, any drugs used and maternal condition and helps avoid extensive descriptive notes [2]. It is a practical device in a busy labour room with many cases, but limited personnel to screen for abnormal labour. With its use, there is no need to record labour events repeatedly. It helps to predict deviation from normal progress of labour, and supports timely and proven intervention. It also helps to facilitate responsibility to the person conducting labour [3]. The Partograph graphically represents key events in labour and provides an early warning system [4]. Partographs when used with defined management protocols is an inexpensive tool which can effectively monitor labour and be helpful in reducing incidences of both maternal and fetal morbidity and mortality by reducing the number of operative interventions, prolonged labour, obstructed labour and caesarean section [5].

Given that the partograph is an extremely useful tool to monitor events of labour, the present retrospective study was carried out to answer whether or not the partographs that

are used to monitor mothers in labour are recorded to the standard. A fuller understanding of this process will be important to educate further the personnel filling the partograph and also to make policies and strategies in the provision of maternity care services.

1.1 Aims and Objectives

1) To determine whether the partographs are correctly being filled by the postgraduate students.

2) To find out which part of the partograph is not being properly filled.

2. Material and Methods

100 case records were randomly selected from a period of January – May 2015 (20 records per month) and retrospectively studied by 2 examiners.

2.1 Inclusion Criteria

Randomly selected case records of women who delivered vaginally, with WHO partographs having complete or partially complete information and excluded those partographs which had no information recorded on them (such as partograph sheets on which only a delivery summary is recorded).

2.2 Exclusion Criteria

Records having information showing, intrauterine fetal death (IUFD), breech presentation, completed 1st stage of labour and elective caesarean section were excluded because the partograph completion is not recommended for mothers with the aforementioned characteristics.

2.3 Data Collection

A pre-tested and structured checklist was developed, after studying the literature relevant to the study being conducted. The checklist was designed to obtain information on the main variables which are included as components of the modified WHO partograph. To give more objectivity to the assessment, the parameters of labour / parts of the modified WHO partograph were assessed to determine whether they have been monitored and filled according to standard protocols [6].

Standard protocols were defined based on the time interval as follows: - (1) moulding of fetal head, cervical dilatation, descent of the presenting part and blood pressure were monitored every four hours; (2) fetal heart rate, uterine contractions and maternal pulse monitored per 30 minutes; (3) Details of the baby after birth e.g. birth weight, apgar score, etc. should be recorded on the partograph.

Records with any of the parameters inadequately filled according to standard protocols were labelled as 'substandard'. If information pertaining to any of the parameter was not documented or the partograph was completely absent from the patients case file then they were termed as 'not recorded'. If all the criteria are met for each parameter on the partograph then they were judged as 'standard'. It is also important to record the condition of the baby on the partograph to include the Apgar score (Apgar score of ≥7 was considered satisfactory in this study).

All the partograph records obtained were systematically reviewed by the examiners using the checklist. All partographs were scrutinized for standard documentation of fetal heart rate, moulding, state of membranes, cervical dilatation, descent of the presenting part, uterine contraction, action line crossed/not crossed, maternal blood pressure, and condition of the baby after birth.

3. Results

100 of the modified WHO partographs that had been used for labour management during the study period were reviewed. Based upon the review it was found that fetal heart rate was not recorded in 9 (9%) and the records were judged to be sub-standard in 13(13%) while recorded up to the recommended standard in 78(78%) of the partographs reviewed (Table 1).

In 20 (20%) of the 100 modified WHO partographs studied, moulding of foetal head was absolutely not recorded at all, while in 15 (15%) it was recorded below the standard and in 65 (65%), it was plotted up to the recommended standard (Table 1).

The status of membranes was recorded to the recommended standard in 52 (52%) of the partographs reviewed while sub-optimally recorded in 26 (26%) and not recorded at all in 22 (22%) (Table 1).

Table 1: Results of assessment of plotting of fetal heart rate, moulding and status of membranes

Sr. No	Parameter		Recorded in Cases Out of 100	Percentage
1	Fetal heart rate	Well recorded	78	78 %
		Substandard	13	13 %
		Not recorded	9	9 %
2	Moulding	Well recorded	65	65 %
		Substandard	15	15 %
		Not recorded	20	20 %
3	Membrane status	Well recorded	52	52 %
		Substandard	26	26 %
		Not recorded	22	22 %

Measurement of cervical dilatation was recorded in 96 (96%) of the partographs but 9(9%) of these records were substandard and 87 (87%) were recorded up to recommended standard, while cervical dilatation was not recorded in 4(4%) of the partographs reviewed. Uterine contraction was not at all recorded in 10 (10 %) while recorded to the standard in 71 (71%) and sub-optimally recorded in 19 (19%) of the partographs studied (Table 2).

Descent of the presenting part was absolutely not recorded in 49 (49%) of the partographs reviewed, whereas recorded to standard in 31 (31%) and were substandard in 20 (20%) (Table 2). The action line of the cervical graph was crossed only in 10(10%) of the recorded partographs. 90 (90%) deliveries during the period of study had their blood pressure monitored, out of which seventy eight (78%) were monitored to standard while 12(12%) were substandard. Post delivery baby notes were recorded in 96 (96%) of the partographs. Biochemical tests of urine albumin were performed and recorded in 89 (89%) partographs.

Table 2: Results of assessment of plotting of cervical dilatation, uterine contraction and descent of fetal head

Sr. No	Parameter		Recorded in Cases Out of 100	Percentage
1	Cervical Dilatation	Well recorded	87	87 %
		Substandard	9	9 %
		Not recorded	4	4 %
2	Uterine Contraction	Well recorded	71	71 %
		Substandard	19	19 %
		Not recorded	10	10 %
3	Descent of head	Well recorded	31	31 %
		Substandard	20	20 %
		Not recorded	49	49 %

4. Discussion

The present study revealed significant proportions of substandard and unrecorded parameters of labour on the modified WHO partograph. Lack of records for the descent of the presenting part in 49%, moulding in 20% and the fetal heart rate in 9% of the studied partographs points towards poor documentation, and probably poor monitoring and supervision of labour. In order to attain good fetal outcome, it is extremely important to monitor fetal condition during labour [7]. It was hoped that completion of this instrument would help towards achievement of that goal.

Among 100 of the modified WHO partographs reviewed, foetal heart rate was not recorded in 9 (9%) and was sub-standard in 13 (13%) while monitored up to the recommended standard in 78(78%) of the partographs. This finding reported a higher figure than a study done in Uganda [8] where the partograph documentation that fulfilled the standard monitoring of foetal heart rate was only 2%. This difference could be due to differences in the health system policy on the use of a partograph during labour and also on the time gap between the present study and the study in Uganda which was conducted from May 23rd to 27th June, 2008 [8].

In the present study only 78%, 87% and 71% of the fetal heart rate, cervical dilation and uterine contraction respectively were recorded according to the recommended standard protocol for monitoring of these three labour parameters. This is indicative of substandard monitoring of parameters on the partograph against standards. These findings were similar to studies done in Tanzania, Uganda and Benin [6,8].

Another study also showed poor monitoring of the labour parameters against the accepted standards. This necessitates the need for regular pre-service and on-job training of obstetric care givers on completion of the partograph and perhaps a mandatory health facility policy on the completion of the partograph [2,9].

Similar to study reports from Nyamtema and Ogwang [6,8] cervical dilation was relatively more frequently (87%) recorded to the recommended standard in this study as well, while uterine contraction was not recorded in 10% of the partographs reviewed. This is similar to the study reported from Tanzania [6] where cervical dilatation was the most frequently recorded parameter of the progress of labour (up to 97%), while uterine contraction was not recorded in almost two thirds (61%) of the partographs reviewed. Such a wide variation in the records may suggest that obstetric care givers prioritized documentation of cervical dilation over the other parameters [2].

This study has also brought to notice that the majority of the obstetric care givers had few skills on the accurate completion of the partograph as all of the labour parameters were recorded to standard in up to 70% of the modified WHO partographs from the 100 which were reviewed. This finding was higher than the findings from Tanzania [6] where only two labour parameters were monitored by over 40% of the partographs.

Lack of documentation and poor documentation of some parameters of the progress of labour could prevent early

detection of complications. Early detection as well as timely intervention on obstetric complications is the most crucial activities to prevent maternal and perinatal morbidity and mortality [10]. The poor documentation of the parameters of labour on the partograph found in the present study likely reflects poor intrapartum care [11]. A pre and post educational assessment done by facilitators and reviewers along with the documentation of outcomes may provide further impetus for appropriate completion of the partograph.

The limitations of this study can be summed up as following. Firstly, the study retrospectively assessed the appropriate completion of the parameters of the partograph during labour; and completion may not necessarily mean use, so the findings of the present study cannot exactly reflect on the extent of use of the partograph for monitoring labour progress. Secondly, as this study is confined to rural health facilities of Maharashtra, the findings may not be generalizable to all public and private health facilities in and out of this region.

5. Conclusion

Partograph use is recommended for routine monitoring of labour, as it most definitely helps the health care provider in early identification of slow progress in labour, and it also helps to initiate appropriate interventions for prevention of prolonged and obstructed labour [12,13].

The present study showed lack of accuracy in completion of the modified WHO partographs during labour in the study centre. The findings can either reflect poor management of labour or simply inappropriate completion of the tool.

Based on the findings of this study, and earlier recommendation [2], pre-service and periodic training of health workers on the appropriate completion of the partograph, regular supportive supervision and guidance, provision of guidelines and mandatory health facility policy are recommended.

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