

Preventing prolonged and obstructed labor



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Prolonged labor and obstructed labor are major causes of maternal and newborn morbidity and mortality in india. One of the tools used to monitor labor and prevent prolonged and obstructed labor is the partograph, a single sheet printed paper on which labor observations are recorded.(Fistula care., 2011).

The timing of interventions is the one of the crucial factors in active management of labor, whether these be amniotomy, augmentation, ceasarean section or transfer to a central unit. The maintenance of a partogram for the management of the labor helps to indicate, with its alert line and action lines, the optimum timing of these interventions and to clearly differentiate normal from abnormal progress in labor. The partogram could be used at all areas of obstetric care by basic care providers who are specially trained to assess dilatation of the cervix and when it used properly, helps to detect cases of abnormal labor without delay, thus allowing timely intervention. Partogram is a composite graphic record of cervical dilatation and descent of head against duration of labor in hours. It also provides information about fetal and maternal condition that are all recorded on a single sheet of paper.

The modern partogram contains many relevant parameters related to labor, mother and the fetus. These parameters are cervical effacement and dilatation, descent of part which is present, fetal heart rate, duration and frequency of uterine contractions, color and quantity of amniotic fluid which is passed per vaginum, maternal parameters such as vital signs and drugs used during labour. This pictorial documentation of labor facilitates early recognition of poor progress. Plotting of cervical dilatation also enables

prediction of the time of onset the recording of all relevant data on a single page, it facilitates the easy handing over of mothers, helps in early recognition of complications and highlights inefficient clinical practice.(James et al., 2001).

The partogram is an observation chart that may be used to facilitate assessment of the progress of labor, including maternal and fetal well being. Historically progress is measured by linear progression along a prescribed time scale, whereby a curve of cervical dilatation is measured in centimeters plotted against time in hours (Friedman 1955), and descent of the head abdominally. Many modifications to the partogram have occurred, resulting in the introduction of alert line and action lines. Basically, the action line was 2 hrs to the right of the alert line, and augmentation instituted at this time. Once labor is confirmed as in the active phase, cervical dilatation is expected to progress at <2cm in 4 hrs (NICE 2008). Alberts (2007) also supports this as a realistic expectation, she goes on to say that for some women, progress might be as little as 0.3cm per hour and the progress of labor should not be assessment of the descent of the presenting part abdominally.(Macdonald et al., 2011).

An accurate record during labor provides the basis from which clinical improvements, progress or complications of the mother or fetus can be judged. For this reason the notes should be kept in chronological order. The maternity record is shared between the midwife and the obstetrician. The obstetrician makes notes of his or her findings, timing of visits and may prescriptions made. The same standards apply to all practitioners. The midwife usually enters the summary of labor and initial details about the

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baby. In recent years the partogram or partograph has been widely accepted as an effective means of recording the progress of labor. It is chart on which the salient features of the labor are entered in a pictorial form and therefore provides the opportunity for early identification of deviations from normal labour.(Fraser et al., 2007).

The best clinical tool that diagnoses the poor progress of labor is the partogram (even in higher centers) and will always help in early detection of the abnormal labor. It is very handy, easy to use and easily reproducible too. The use of a partograph in labor was associated with reduction in prolonged labor and decreased caesarean section rate. Another advantage of the use of a partograph was improvements in fetal and maternal morbidity in a significant manner.(Kamini., 2011).

The cervicograph is the pictorial representation of the cervical dilatation charted against the hours of labour. Studies have shown (Friedman and Sachtleben 1965 & pearson 1981)that the cervical dilatation time of normal labor has a significant sigmoid curve which can be divided into two distinct parts such as the latent phase and the active phase. (Bennett et al., 2001).

In some cases the partogram may allow space for a certain amount of comment but usually the midwife will keep a separate written account in which she records her observations of the women's psychological condition and any other details not included on the graph. If any changes in the birth plan become necessary , the midwife will note down how these were discussed with the women and her partner and with what outcome. In this way the women will feel involved in any decisions made, which encourages

feelings of being in control and enhance the birth experiences. (Ali et al., 2010).

The midwife can verify the progress of labor effectively through the use of graphic charts (partograms) on which one plot cervical dilation and station (descent), this type of graphic charting assists in early identification of deviations from expected labor patterns.(Lowdermilk, et al 1997).

NEED FOR THE STUDY

The latest available data on MMR india is 212 per 100, 000 live births and IMR is 44 per 1000 live births. Out of 180 countries now india ia ranked 126 when countries are arranged in an ascending order for MMR and 45 out of 195 countries in IMR.(Petterson, 2004).

The obstructed labor stands one of the five major causes of maternal morbidity and mortality in developing countries like india. About 4% and 70% of all maternal deaths is due to obstructed labour or rupture of the uterus, accounting to a maternal mortality rate as high as 410/100, 000 live births. (S. Quenby et al., 2003).

Introduction of partograph in the management of labor(WHO 1994) has reduced the incidence of prolonged labor and caesarean section. There is improvement in maternal morbidity, fetal morbidity and mortality.(Dutta., 2013).

The development of the partograph (or partogram) provides a graphical overview of the labor to allow early identification and easy diagnosis of the pathological labor for health care providers. Emanuel Friedman was the first
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obstetrician who provide an accurate tool for the study of individual labours. In the 1970's partographs starts getting popularity and today majority of delivery and labour units use them. A large number of literature shows that their correct use reduced the rates of prolonged labors and many complications which arises during labour. There is also a suggestion that the use of the partograph results in fewer surgical interventions such as Caesarean sections.

Nowadays the electronic partographs are becoming popular and it can be made into medical records systems. The use of partographs is very common in hospitals. A study has been conducted on health care workers and midwives who works in delivery units of Nigeria found that only 10% of caregivers used the partograph while conducting labour, and only few used it properly. The study found that the correct use of partograph may be restricted by training, time, and caregiver skill level. In many of the cases, literacy and numeracy are major problems to use it. Finally, the study concludes that the health workers requires training about partograph for the early identification of deviation from normal labour.(Neison et al., 2005)

The partograph provides information about deviations from the normal progress of labor and about various abnormalities of maternal or fetal condition during labor. It may alters providers when a woman needs an intervention and which facilitates throughout evaluation of the effects of those interventions.(Fistula care., 2011).

The partograph helps to reduce the time midwives spent on writing notes, while helps them to keep detailed and accurate records. It also allow them to

provide an emotional support to the women in labour. Hence, the investigator who has done the research feels that it is very imperative to train the nurses working in maternity unit and to improve the knowledge and skill in the use of partograph. This would help the nurses to provide a comprehensive intrapartum care to the mothers in labour with early identification and prevention of complication arising during labour, So said that the partograph plays an important role in reducing the maternal mortality and morbidity due to labour.(Arezet al., 2009).

In maternal health care, it is imperative that a skilled attendant be present at each delivery. According to WHO, a skilled attendant at birth is one of the most effective interventions to reduce maternal mortality. Among various interventions which have proven valuable in maternal health care is the partograph, which should be used in health facilities everywhere for monitoring labor and preventing complications.(Dangal., 2006).

In a WHO multicenter trial conducted in southeast Asia which includes 35 484 women. The study shows that the introduction of the partograph during labor management significantly reduced both prolonged labor from 6. 4 to 3. 4 % of labors and the percentage of labors which requiring augmentation which is from 20. 7 to 9. 9% to 8. 7 %, There was also a reduction in the mean number of vaginal examinations during labor probably leads to the drop in cases of postpartum sepsis by 59%. Improvement in maternal morbidity and fetal mortality which took place among both multiparous and nulliparous women. The participants in WHO trial agreed that the partogram improved the discipline communication about management of labor and

freed midwives time, this may be an important element of the partograms success as more time can be devoted to ' companionship'. The WHO trial points the way towards effective management of labor where reduced but timely intervention is the key to success.(James et al., 2011).

Partographs are tools that allow labor progress to be graphically recorded and assessed visually . Partograph helps in early detection of abnormal progress of labour and are credited with decreasing rates of prolonged labor, oxytocin use, cesareans, and intrapartum morbidity or mortality as compared to regular care. Eventhen, partograph is not so used widely but only rarely in countires like U. S. A. A research team has made a partograph which is physiologically based for hospital use in assessing the labors of nulliparous women with spontaneous onset of labour. They shows that their tool greatly improves the outcome which in turn, optimize the safety of the mother and the fetus during labour. (Neal et al., 2011).

A study conducted to evaluate the Partogram programme in the University Center of Health Science in Cameroon, Africa and Yaounde. It ia a retrospective study with 686 patients and a prospective study with 1045 patients . The institution which has this program shows that the perinatal mortality has been reduced by 10 deaths per 1000 births because of use of partograph and it provides accurate and reliable results for early identification of abnormal labor. About two-thirds of the morbidity and mortality related to labour and 72% of deliveries with medical or surgical conditions has also occurred in the clinical area where the labor curve crossed the action line in the partograph. (Drouin et al., 1979).

STATEMENT OF THE PROBLEM

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE, ATTITUDE AND SKILL REGARDING PARTOGRAPH AMONG MULTIPURPOSE HEALTH WORKERS IN SELECTED MATERNITY CENTRES IN COIMBATORE.

OBJECTIVES

- To assess the level of knowledge, attitude and skill regarding partograph among multipurpose health workers in selected maternity centres.
- To identify the effect of structured teaching programme on knowledge, attitude and skill among multipurpose health workers in maternity centres.
- To associate the findings with demographic variables.

OPERATIONAL DEFINITION

STRUCTURED TEACHING PROGRAMME

Refers to a well planned instruction which is designed to improve knowledge, attitude and skill.

KNOWLEDGE

It refers to the actual understanding of Mutipurpose health workers on partograph as elicited by knowledge questionnaire.

SKILL

It refers to the ability to use partograph which is assessed by using checklist.

ATTITUDE

It refers to the belief of the multipurpose health workers towards partograph.

PARTOGRAM

The progress of labour depicted in the form of graphs.

LABOUR

The process of child birth.

HYPOTHESIS

H₁ : There will be a significant difference in the knowledge level of multipurpose health workers regarding partograph before and after administration of Planned Teaching Programme.

H₂: There will be a significant difference in the attitude level of multipurpose health workers regarding partograph before and after administration of Planned Teaching Programme.

H₃: There will be a significant difference in the skill level of multipurpose health workers regarding partograph before and after administration of Planned Teaching Programme.

ASSUMPTION

1. Multipurpose health workers may have previous knowledge on partogram.

2. Planned Teaching programme will enhance the level of knowledge ,
skill

and attitude among Multipurpose health workers.

CONCEPTUAL FRAMEWORK

A conceptual framework or models is a set of concepts, assumptions, principles and rules which provides an outline for conducting research.

Thus the investigator adopted Donabedian's Program Evaluation Model (1982). Avedis Donabedian a physician and health services researcher at the University of Michigan, developed the original model in 1966.

This model consists of three aspects such as structure, process and outcome.

1. Structure:

Structure includes all the factors that affect the context in which care is delivered. It includes infrastructure, equipments, supplies, manpower etc. In this present study the infrastructure is the selected corporation maternity centres in Coimbatore where the teaching has been taken place. Equipments and supplies are the audio visuals aids used for teaching (pamphlet & handout). The human resources are the multipurpose health workers

2. Process:

It is the activities carried out with the help of structure to achieve the outcome. In this study, it is the structured teaching program regarding partograph done by the investigator with pamphlet and handout.

3. Outcome:

It is the result of execution of the process through the structure. In this study, the outcome is the improvement in knowledge, attitude and skill regarding partograph among multipurpose health workers.

If the outcome is positive, it ensures that both the structure and process is functioning effectively. In this study the result shows that the teaching has improved the knowledge, attitude and skill regarding partograph among multipurpose health workers.