Preventing Prolonged Labor by Using Partograph
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Citation

Abstract
The partograph can be used to assess the progress of labor and to identify when intervention is necessary. Studies have shown that using the partograph can be highly effective in reducing complications from prolonged labor for the mother (postpartum hemorrhage, sepsis, uterine rupture, etc.) and for the newborn (death, anoxia, infections, etc.). It has shown to be effective in preventing prolonged labor, in reducing operative intervention and in improving the neonatal outcome. Prolonged labour, augmented labor, caesarean sections and intrapartum fetal deaths were reduced with the use of the partograph.

INTRODUCTION
Prolonged labour in the developing countries is commonly due to cephalopelvic disproportion (CPD), which may result in obstructed labour, maternal dehydration, exhaustion, uterine rupture and vesico-vaginal fistula. In countries where CPD is not prevalent, abnormal progress of labour is often due to inefficient uterine action.

Early detection of abnormal progress of labour and the prevention of prolonged labour significantly reduce the risk of postpartum haemorrhage and sepsis, and eliminate obstructed labour, uterine rupture and thereby reduce the maternal mortality.

USES OF PARTOGRAPH
The partograph has been in use since 1970 in a number of countries, and used extensively in many centres. It has been found to be inexpensive, effective and pragmatic in a variety of different settings including developed and developing counties. It has shown to be effective in preventing prolonged labour, in reducing operative intervention and in improving the neonatal outcome. Prolonged labour, augmented labor, caesarean sections and intrapartum fetal deaths were reduced.

The use of a partogram for the management of labour has been shown to be beneficial in that it clearly differentiates normal from abnormal progress in labor and identifies women likely to require intervention.

THE PARTOGRAPH
The partograph, a sigmoid curve, is a tool that can be used to assess the progress of labor and to identify when intervention is necessary. It is a graphical record of cervical dilatation in centimeters against duration of labor in hours. Studies have shown that using the partograph can be highly effective in reducing complications from prolonged labor for the mother (postpartum hemorrhage, sepsis, uterine rupture, etc.) and for the newborn (death, anoxia, infections, etc.). In a WHO multicentre trial improvements in maternal and fetal mortality and morbidity took place among both nulliparous and multiparous women after the use of a partograph.

Figure 1
Active management of labor advocates early recognition of non-progressive labor. This can be done by using a partograph, or graphical depiction of a labor “curve”. The first stage of labor has two phases, a latent phase and an
active phase. In primigravidae, the latent phase is often long
(about 8 hours) during which effacement occurs. In
multigravidae, the latent phase is short (about 4 hours) and
effacement and dilatation occur simultaneously. Dilatation
of the cervix at the rate of 1 cm per hour in primigravidae
and 1.5 cm in multigravidae beyond 3 cm dilatation is
considered satisfactory. The alert line drawn from 3 cm to 10
cm in active stage represents the rate of dilatation.
Therefore, if cervical dilatation moves to the right of the
alert line, it is slow and indication of delay in labour. If the
woman is in a health centre, she should be transferred to
hospital: if in hospital, she should be observed more
frequently.

A partograph must be started only when a woman is in labor.
In the latent phase (cervix dilatation not more than 2 cm),
she should have one contraction in 10 minutes, each lasting
20 seconds or more. In the active phase (cervix dilatation
more than 3 cm), she should have two or more contractions
in 10 minutes, each lasting 20 seconds or more.

E.A Friedman in 1954 first described a normal cervical
dilatation pattern. Various authors have developed similar
nomograms in many geographical areas. None of these have
shown significant differences between ethnic groups.
This can be used at all levels of obstetric care
by basic care providers who are trained to assess cervical
dilatation. When used properly, it helps to detect cases of
abnormal labour without delay, thus allowing timely
intervention.

The WHO model of the partograph represents in some ways
a synthesized and simplified compromise, which includes
the best features of several partographs. The fetal condition, the progress of labour and the maternal
condition are the three components of the partogram.

The partograph is used to plot the following parameters for
the progress of labor: cervical dilatation, descent of fetal
head, and uterine contractions. It will also be used for
monitoring fetal conditions with the following parameters:
fetal heart rate, membranes and liquor and moulding of fetal
skull. Additionally, the partograph can be used to monitor
maternal condition: pulse, blood pressure, temperature,
urine, drugs, IV fluids, and oxytocin.

Labour is monitored by observing the progressive
effacement and dilatation of the cervix and the descent of the
presenting part against time in a chronological manner. The
frequency and duration of uterine contractions is also noted.

The maternal condition is monitored by observing the pulse,
blood pressure, temperature and hydration. In addition, the
use of anesthetic and oxytocic drugs can be recorded in the
partogram. The fetus is monitored closely on the partograph
by regular observation of the fetal heart rate, the liquor, and
the moulding of the fetal skull bones. A gradual increase in
the basal FHR or prolonged bradycardia indicates the
possibility of fetal distress. The colour of the amniotic fluid
if heavily stained with meconium (thick or grade 3), with
scanty fluid or fresh passage of meconium, or the absence of
amniotic fluid at the time of the rupture of membranes is
suggestive of possible hypoxia.

CONCLUSION

The partograph is used to assess the progress of labor and to
detect when intervention is necessary. Studies have shown
that using the partograph can be highly effective in reducing
complications from prolonged labor for the mother and for
the newborn. Prolonged labour, augmented labor, caesarean
sections/ operative interventions, neonatal morbidity and
intrapartum fetal deaths were reduced with the use of the
partograph. Easy and early recognition of poor progress of
labour (with the use of partograph) and the prevention of
prolonged labour significantly reduce the risk of postpartum
haemorrhage and sepsis, and eliminate obstructed labour,
uterine rupture and thereby reduce the maternal mortality

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