

ETD - A 20 second tool for absolute prevention of prolonged and obstructed labor in resource poor situations

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‘ETD’ (Expected ‘Time’ of Delivery) is a mental tool which predicts ‘delivery time’ instantly. For this for each labor case, at the very first VE (Vaginal Examination) in ‘active phase’ of labor, when the cervix is at least 4 cm dilated, 2 ETDs are to be ‘mentally’ calculated (see below) and written down in big bold letter in front of the case sheet (see figures below) which should not take more than 20 seconds to do.

The far reaching and binding effect of the tool-ETD

As more or less the approximate expected ‘delivery-TIME’ has been stamped, there would be no question of Prolonged or Obstructed labor if one reasonably sticks to this predicted time and this amounts to programming of labor as is effected by the ‘Alert line’ and ‘Action line’ of WHO partogram but in this case, almost ‘Timelessly’, ‘Paperlessly’, ‘Graphlessly’ by the application of this simple mental tool and also without having to undergo any training. Just the knowledge of clock is required for doing this.

How to calculate the ETDs

ETDs are to be found out by using the Friedman’s formula of cervimetric progress of labor - of 1 cm/hour - as used in the WHO partogram- like this: For example, if in a case the cervix was found 4 cm dilated at 2 PM VE, her first ETD, termed the ALERT ETD, would work out as – 2 PM +6 hours = 8 PM assuming that she would take 6 hours to dilate the remaining 6 cm to become 10 cm or fully dilated.

Simple mental addition of four (4) hours to it would give the Action ETD for the case (8 PM+4=12 midnight in this sample case) and this would take only split of a second to do. Actually it happens automatically mentally as soon as the vaginal fingers have determined the dilatation. It may be noted that at this first VE absence of cephalo-pelvic disproportion (CPD), malpresentation and fetal distress are to be ensured and if present their management is to be planned forthwith.

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The unique 'Alarm' and 'Reassuring' feature of ETD

Writing it boldly and in front of the case sheet serve as a constant alarm for all concerned in the management of the case and makes them take necessary care (see 3C protocol below) so as to deliver her sometime around the two ETD time figures. Besides this, the clear announcement of the two probable time figures for delivery is very reassuring for the laboring mother who invariably suffers from great uncertainty and anxiety. This is total transparency of management without the jugglery of graph which many less educated women or their relations are unable to understand.

The simple '3 C' protocol for Care of laboring mothers

C-1 : Care of mother –Temperature/Pulse (T/P), Blood Pressure (BP), Dr/Dr – Drip/Drug.

C-2 : Care of fetus - Foetal heart rate (FHR) and Meconium.

C-3 : Care of contraction - How many (say 2) per 10 minutes and each lasting how many seconds (say 20). These are to be recorded as 2/10/20 (total at a glance clarity, in contrast to WHO partogram which demands drawing a complex design and thereby wastes time.

Any abnormal findings like rise of BP or temperature, FHR going above or below cut-off etc. at any point of time is to be circled in red for flagging at a glance alarm.

Practical significance of the two ETDs

■ Alert ETD - If the patient has reached 'Alert ETD' time and has not delivered – Get Alerted, inform specialist for the assessment of the cause of the delay which has to lie in 3 vital 'P's' – the Power,

Passage and Passenger and institute suitable management depending on the cause found- so that she can be delivered by the next 4 hours i.e. by her 'Action ETD' time provided fetal and maternal condition permit such allowance.

If specialist is not available, like in Primary Health Centre, patient is to be transferred to the

nearest specialist centre for further management when there will still be 4 hours in hand for the long journey through rough rural road. Hence, this ETD is also be called 'Transfer ETD'.

■ Action ETD - If any patient fails to deliver even by this extra 4 hours of close observation and necessary situational management - action is to be planned to deliver her soon by the means suitable for the findings at that point of time.

Scope of use of the tool ETD

It is meant for –

- Low risk cases only which constitutes 80% of laboring women
- In 'Active phase' of labor (dilated to 4 cm and having 'painful' contractions-1 in 5 mins or quicker)
- With Normal presentation which constitutes 95% of laboring women
- Where the 'Latent phase' (the phase up to 4 cm dilatation) has not exceeded 8 hours i.e. labor is not already prolonged (see below).

Note

1. For 'already prolonged labor cases' i.e. those who have already been in their 'true' first stage of labor (not simply niggling irregularly) for more than eight (8) hours eg. those brought in from Primary Health Centre, it should be assumed that they have already crossed their 'Alert ETD' and are in that critical 4 hours zone and to be managed accordingly depending on the findings of assessment of 3 vital 'P's' as mentioned above.

2. The tool ETD does not apply on patients who are in second stage of labor i.e. already fully dilated.

The evidence base of adopting ETD as a labor management tool

It has been reported by several authors that around 75-80% of uncomplicated primipara deliver vaginally without augmentation by their 'Alert ETD time' as calculated at the first VE done in the active phase of labor i.e. when the



cervix is at least 4 cm dilated, multipara delivers faster than this [1,2,3].

The evidence why ETD has been based just on one parameter – the rate of cervical dilatation

This is because this parameter has been found to be ‘the only exact arbiter’ of progress of labor by many researchers [1,3,4,5]. So, if the dilatation is progressing smoothly (at the rate of 1 cm/hour on an average, it can be assumed that the other parameters would very likely follow to effect normal delivery. It is noteworthy that because a fairly long time is required for the signs of obstruction like big caput, gross molding etc to form and the distance between the minimum dilatation of 4 cm to 10 cm or full dilatation is only 6 cm or 6 hours by following the ETD rule cases of prolonged and obstructed labor will not be missed.

How many VEs are to be done?

After allotting the ETDs, the next VE is to be done 3 hours after that and the next one at the Alert ETD time. However, it is expected that by the Alert ETD time 75-80% patients would have delivered vaginally. Those, 20-25% who have not delivered by Alert ETD time should have their next VE done 3 hours after the Alert ETD time. The small percentage of patients who have not delivered even when they have reached their Action ETD time, they would need critical assessment of the whole case and also keen endeavor in spotting any treatable cause and a

solid plan

of delivery is to be framed. (Two hourly VE as is practiced in conventional partogram is not only unnecessary but also increase the risk of infection and are quite uncomfortable for the patient).

When to rupture the membranes

It may be done at any time in active phase of labor. So, it should be done at the very first VE when she would be at least 4 cm dilated. It is then only six hours to go.

Conclusion

Labor management has never been simpler and so open (no secrecy, no uncertainty). This is specially suitable for very poor resource situations and countries.

References

1. Philpott RH, Castle WM. Cervicographs in the management of labour in primigravidae. J Obstet Gynaecol Br Commonw. 1972 Jul; 79(7): 592-598.
2. Duignam NM, Studd JWW, Hughes AO. Characteristic of normal labour in different racial groups. BJOG. 1975; 82(8): 593-601.
3. Cardozo LD, Gibb DMF, Studd JW, et al. Predictive value of cervimetric labour patterns primigravidae. BJOG. 1982; 89: 33-38.
4. Friedman EA. Primigravid labour; a graphicostatistical analysis. Obstet Gynaecol. 1955; 6(6): 567-89.
5. Studd J. Prevention of prolong labour. Br. Med J. 1973; 4(5890): 451-455.