Course Name :An Overview on Maternal Health Antenatal, Intranatal and Postnatal Care

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WHO Labour Guide

Good morning students. I welcome you all to today's session for the online NPTEL certified course on the topic and overview on maternal health, the antenatal, intranatal and postnatal care. I am Dr. Barnali Ghosh, an obstetrician and gynecologist working as assistant professor at Biseroy Multispeciality and Medical Research Center, IIT, Kharagpur. So today we are going to discuss regarding the WHO labor guide. We are already in the intrapartum care that is the care of the mother and the fetus during the intrapartum period or during the events of labor.

So WHO has enlisted the guidelines regarding the labor care right and today we are going to discuss. This is mainly you know will be a revision of our partogram class and the revised portion of the partogram, the changes that has been made by WHO in 2018 and was updated in 2020 will be discussed in today's class right. So the concepts covered will be the WHO labor care guide, monitoring of the mother in the intrapartum period that is during the process of labor and it involves or includes respectful maternity care, very very important. It should be a supportive care, a respectful maternity care so that the mother as well as the baby has a positive birthing experience.

Key words are as given. So this is the WHO labor care guide manual and it is actually the tool which is used or which can be used for implementing the recommendations on the intrapartum care. They are the guidelines which will guide the skilled birth attendant for the intrapartum care of the mother and the baby for a positive child birth experience. So what are the guiding principles for the WHO intrapartum care module? Number one is it should be every labor monitoring and childbirth should be individualized and woman centered right. So that will depend and vary from individual to individual and no unnecessary intervention should be undertaken without a clear medical indication.

It stresses upon the fact of normal progression of labor just to observe the events of labor and to record the events of labor on the WHO labor care guide module and in case of any abnormality or deviation from the normal should be you know instantly diagnosed or instantly apprehended by the skilled birth attendant. It should be informed to the higher authority or the

senior obstetrician and in case everything is normal no alert of or abnormalities are detected then we should just observe and it tells or stresses on the fact that no unnecessary intervention are to be taken without a clear medical indication. Interventions when taken should serve an immediate purpose right. So if any intervention is taken say to augment labor or to induce labor or any medication which is given to the mother it should serve an immediate purpose and it should prove to be beneficial right for the mother as well as the baby and above all the positive childbirth experience for the mother the newborn and her family should be at the forefront of the labor care at all times. It stresses on respectful maternity care.

So this is the pictorial diagram and the areas of interest which we look into during the intrapartum care right. Staff should be competent and motivated and essential physical resources infrastructure should equipments basic equipment should be present in the labor ward and what to go for it should be a respectful care it should give emotional support to the mother from a companion of her own choice during the process of labor there should be effective communication by the medical staff and the woman and her companion right in order to discuss the detailed findings of the examinations of the mother and the further plan of action if any or interventions if any to be taken for that mother for the well being of her and her child. There are different pain relief strategies which needs to be discussed regular labor monitoring observation labor monitoring documentation very very important and audit. Audit should also be done regarding the labor complications in that labor ward and a feedback to be taken right to improve the labor care in that institute or health facility. Oral fluid intake should be you know encouraged IV fluid infusion is now as per WHO should not be started unless indicated because that will restrict her mobility and we always encourage the mother to be mobile to know not be in supine position to have mobility to be ambulatory during the first stage of labor mobility in labor and birth position of choice is stressed upon during the birth during the second stage the mother can attain any position of her choice it may be squatting it may be you know supine it may be dorsal position of her choice and pre established referral plan.

So, there are certain threshold the alert alert notations right in the labor care module and when any alert findings are noted then we plan our next further step right it may be in the form of intervention in that facility or it may need some referral to higher center and continuity of care once labor the WHO labor care guide partogram has been initiated in the active phase of first stage of labor it should be continued throughout the first stage as well as the second stage up till the birth of the baby. So, what is the time? Time to initiate the labor care guide that was already discussed in partogram this is actually a modified partogram the partogram which was already present right. So, WHO has made certain modifications, but the basics remain the same that it should start in the active phase of first stage of labor which starts in the 5 centimeter or more cervical dilatation. So, when the cervical OS is more than equal to 5 centimeter in the previous partogram it was 4 centimeter right. So, here in modified partogram it is starting the plotting is starting from 5 centimeter of cervical dilatation regardless of her parity or membrane status.

Labor care guide should not be initiated during the later phase of labor right. So, before 5 centimeter dilatation in the latent phase the partogram should not be plotted right because that will that will cause unnecessary intervention or unnecessary anxiety in the mother. And once it is initiated in the active stage of first active phase of first stage of labor it should continue monitoring throughout the first stage and second stage of labor. And it should be plotted for all women right it should be plotted for all women mostly for the low risk women because we have discussed that for high risk mothers with certain complications it needs you know more specialized and continuous monitoring in the form of CTG continuous electronic fetal monitoring. And where to use where to use at all levels of health care in every labor ward it may be in the sub center it may be in the subdivision hospital district hospital tertiary care hospital or medical college.

So, at all levels of care in the health facilities and it helps in early detection of the potential complications. So, we have discussed partogram or this you know the main motto of plotting the partogram is to have an early detection of any abnormality or potential complications that may arise in the further stages of labor. And this will contribute to timely referral whenever it is required timely referral or timely intervention whenever it is required. This is the modified structure of WHO modified partogram. So, what are the changes? See there is no alert line or action line in this partogram previously we had an alert line and an action line.

So, here it is not present and also sections 1 to 7. So, 7 sections are present and we will discuss one by one know how the part what each section deals with ok. So, this is the total WHO labor care guide or the modified partogram and see here is the alert column right. So, in this one is the alert column and here there are certain writings. So, here in this column the alert you know actions when you should be alert that are written and if your findings this horizontal this horizontal line is the time axis and each column is 1 hour of duration.

So, when we go for the examination of the mother in the labour room we are going to document that various findings that we get ok. And if it is you know something of alertness you know something which is written in the alert column then we will encircle that finding because we need to be more vigilant we need to know address to that issue we need to communicate that to the senior obstetrician present in the ward ok. So, this is your time axis and here this horizontal line this horizontal axis the vertical axis will be plotting the different components of the findings it may be the maternal findings the fetal findings the labor progress findings ok we will come to one by one. So, section 1 there are 7 sections in section 1 it deals with identifying the information and you know labor characteristics at admission. So, when the patient is getting admitted in the labor ward we need to document her name the name of the woman the parity of the woman her previous history right.

So, the previous obstetric history how many children she have how many abortions did she have you know that formula P 1 you know A plus B plus C plus D. So, number of deliveries previous previous number of deliveries you know which had crossed the period of viability. Then your term preterm right. So, this is term pregnancy this is preterm pregnancy this is abortion which have not crossed the period of viability right and D is your number of living issue. So, by this we deal with the parity.

Next is mode of labor onset whether it is spontaneous or whether it is induced induced by certain you know medical methods pharmacological or non pharmacological in the form say induced by any drugs dino tosto gel or catheter right Foli's catheter or by amniotomy or oxytocin. So, whether it was induced labor or spontaneous in onset. Then the date of active labor diagnosis active labor meaning from 5 centimeter of cervical dilatation. So, here you need to write the date. Next is rupture of membranes when the membrane rupture occurred the date the time and if it is unknown then you have to write here unknown because sometimes a patient does not know when the rupture of membranes occurred.

So, in that case it is unknown risk factors. Risk factors if any in the form where there was a previous history of still birth whether in this pregnancy she is suffering from PIH or GDM gestational diabetes mellitus or there is any associated say thyroid disorder medical disorder surgical disorder you have to write it down for your documentation as well as your knowledge from that partograph ok. Next is section 2. Section 2 will be dealing with the supportive care that is involving respectful maternity care right. So, here we deal with companionship labor companionship.

So, during the period of labor WHO encourages the companion of a individual of the choice of the pregnant mother to be by her side that will give a positive impact on the mother to combat the stress during labor. So, labor companionship n meaning no right. So, that is alert. So, if their companion is present we write as y ok. So, if it is y then it is ok, but if it is no then you have to encircle that ok.

Next is pain relief whether she is going for you know certain forms of pain relief maybe pharmacological or non-pharmacological right. So, that should be plotted oral fluid. Oral fluid should be offered to the mother IV fluid infusion should not be started. Posture, posture regarding posture is to improve the woman's comfort right and we encourage the mother to be mobile or ambulatory during the first stage of labor right. So, supine posture is an alert criteria.

So, mother to be ambulatory is normal or should be encouraged. So, that was regarding the supportive care given to the mother. Now, coming to the care of the baby in sections 3. So, it deals with the baby. What are the findings which we are concerned about? Number 1 is your basal fetal heart rate.

So, baseline fetal heart rate we know normal is 110 to 160. So, less than 110 bradycardia or more than 160 tachycardia both are alert signals right. So, you need to write down you need to write down how frequently do we do the fetal heart rate plotting or monitoring it should be 30 minutes every 30 minutes in first stage and every 15 minutes in second stage in case it is a low risk pregnancy. But if it is a high risk pregnancy then we do it more frequently that is being 15 minutes in first stage and every 5 minutes in second stage and whatever is the findings we will write it here. So, 30 minutes that means, this one is your 1 hour.

So, this is 30 minutes. So, every here you get 140 then next you get say 126. So, all these are normal ok. Next is fetal heart rate deceleration and you always check for fetal heart rate after the uterine contraction not during the uterine contraction any deceleration or fetal heart rate right it can be early, it can be late, it can be variable or there may be no fetal heart rate deceleration. So, most important or of concern is your late deceleration. So, that is a encircled with a your it is should be encircled because it is a alert finding.

So, late deceleration meaning that the fetal heart rate decreases right even after the contraction uterine contraction goes away. Number 3 is your amniotic fluid color whether it is meconium stained, whether it is blood stained right whether it is clear. So, you have to note fetal position. Fetal position how whether to note that it is you know oxy puto posterior or oxy puto transverse or oxy puto anterior. Anterior is normal these two are alert right molding molding whether it is absent no molding or plus 1 plus or 2 plus or 3 plus molding is present.

Next is cappered succedanium if present right molding how we go I have already discussed this. So, the skull bones the skull bones they are not overlapping each other that means, there is no molding. There is slight overlapping 1 plus there is overlapping, but it is reducible on pressure the skull bones they get dislodged. But when it is overlapping and it is non reducible even with pressure it does not get dislodged. So, that is grade 3 molding which will alert you that there may be a chance of cappella pelvic disproportion.

Next is your cappered succedanium whether it is present and the degree of cappered should also be your plotted. So, that was the section 3 which is dealing only with the care of the baby ok. Next coming to section 4 section 4 is mostly the care of the woman. So, some of the vitals which we measure for the mother right. So, they are mostly every 4 hourly every 4 hourly we go and check the pulse of the mother all throughout right all throughout meaning for total 1 minute.

And if it is less than 60 or more than 120 more than equal to 120 that is a cause of concern that is a cause of alertness. Systolic blood pressure should not be more than 140 or it should not be less than 80. Diastolic blood pressure should not be more than or equal to 90. In sitting posture in know resting condition when the diastolic blood pressure gets more than equal to 90 then it is

a cause of concern because it may be a case of PIH which can lead to a huge here or oligohydramnios or fetal distress and that can you know has a more chance of still birth during the process of labour. So, only partogram may not be sufficient for this mother we need to go and have a CTG associated with it ok.

Temperature temperature of the mother to be assessed and if it is less than 35 or more than equal to 37.5 degree Celsius then it is a cause of concern. Urine examination every 4 hourly or as and when the mother voids during the labour. So, in the urine what we assess? We assess the acetone level and the proteinuria these two. So, that was regarding the care of the mother.

Now coming to the most important part that is the labour progress. So, labour progress where what we assess here number 1 is the frequency and duration of contractions uterine contraction. So, frequency meaning number of uterine contractions in per 10 minutes. It should be 3 to 5 that is normal if it is less than 3 that means, less than equal to 2 or more than 5 that is a case of hyper stimulation. So, both these cases it is a cause of concern.

Next is duration. Duration of contraction should be within 20 to 60 seconds ok. If it is less than it is no the uterus is not yet stimulated and maybe sometimes we need to go for augmentation of labour. If more than 60 seconds persisting for more than 1 minutes then it is a case of hyper stimulation you need to cut down the oxytocin or you need to stop the oxytocin right and maybe sometimes you need to give uterine tocolytics that is terbutaline subcutaneous injection. Next is your cervical dilatation. So, here this is a very important concept in this new WHO partogram.

We have previously learned that 1 centimeter per hour 1 centimeter per hour of cervical dilatation and as per that no rate we had that alert line and the action line, but now it is told that 1 centimeter per hour may not be the cervical dilatation in most of the mothers and that does not mean it is abnormal even it is delayed in the previous part right when the dilatation is 5 centimeter or 6 centimeter sometimes we do not get that much of you know a dilatation the rate of dilatation may not be 1 centimeter per hour, but still these mothers will have a normal delivery delivering a healthy baby. So, here now what is the criteria at 5 centimeter dilatation if it is more than equal to 6 hours 5 centimeter dilatation of cervical os if it is remains for more than 6 hours then it is a cause of concern. Before that let it progress by itself spontaneously no need to intervene right. So, at 6 centimeter more than equal to 5 hours at 7 centimeter more than equal to 3 hours 8 centimeter more than equal to 2.5 hours and 9 centimeter more than equal to 2 hours.

So, these are the limits and that if it crosses this limit then it is a cause of concern. 10 centimeter is the end of the active you know the first stage. So, after it becomes to the 10 centimeter then you plot here this is the second stage. So, this is also a new inclusion the second

stage of labor has been included in the new partogram and now you plot in the second stage the cervical dilatation has already been 10 centimeter you need not worry regarding the dilatation you write here just know when the maternal pushing has started the bearing down. So, if it is present so, you write P after 4 hours again you assess you write P and second stage we know it is 2 hours and 3 hours 3 hours in prime and 2 hours in multi if it crosses this time limit then it is a cause of concern.

And next is your descent of fetal head. So, descent of fetal head how? This is by the abdominal same as the old partogram. Abdominal examination the crichton's maneuver by the palm of the left hand of the examiner we palpate the fetal head part abdominally just before vaginal examination right and it should be also in a you know phase of uterine relaxation not during uterine contraction it may must be done after uterine contraction and number of and the part of the fetal head that is palpable right. So, number of fingers two fifth three fifth four fifth. So, if it is firstly if it was say here.

So, you plot 0 descent you plot 0. So, at first it four fifths of the fetal head was palpable and slowly slowly see it decreases to two fifth and then after 4 hours say here it has come to a station you know 0. So, part abdominally the fetal head is not palpable even in second stage part abdominally you cannot palpate the fetal head right. So, that is the method of plotting the descent of the fetal head. So, this is the labor progress events plotted in section 5. Going to section 6 it now gives the information regarding any medication which are given to the mother most commonly oxytocin.

Oxytocin if given then what is the dose of oxytocin that is being given right. So, drops per minute and units per liter. So, what is the dose and at what rate oxytocin is being given should be noted. Oxytocin if any other medicine any other medicine in the form say you give an nifedipine mother is having PIH you have given an nifedipine or say if you have given any other drug right epidosin for cervical effacement or any other medications then it should also be noted IV fluid if you have started. So, you have noted that there is a dehydration in the mother or you need to give oxytocin infusion then you start the IV fluid and you need to note down the time of starting of the IV fluid the type of IV fluid that is being given to the mother.

All these medications are present in the section 6 of the partogram and you know you have to plot that. Now last section last section is your section 7 that is actually dealing with the shared decision making. So, here the WHO says that whatever be the findings right. So, you write it down whatever the examination you know the findings of the examinations of the mother during the labor should be documented and now you need to communicate to the mother as well as with the birthing companion present along with the mother and involve them right involve them take their decision mother's decision in particular and if any further action plan is going to be taken in the form of say amniotomy right. So, only amniotomy WHO does not recommend if you are

going to augment the labor you go for amniotomy along with oxytocin infusion.

So, if there is you know need for start of oxytocin infusion you tell the mother you ask her if say if there is signs of fetal distress and you feel now that no it cannot be through vaginal delivery and we need to go for caesarean section then also the consent of the mother is very very important and so, this gives a criteria for shared decision making. You involve the mother and tell her in the detailed discussion regarding the neighbor events and the further action course plan right which is needed for the benefit of the mother as well as the baby. So, continuous communication with woman and her companion with the health staff recording all assessments and agreed plans. So, plans which are agreed both by the mother and her companion that should be recorded findings of the examinations should be explained and subsequent course of action and its purpose why it is being done should be made clear to enable a shared decision making.

So, that is in the section 7 of the partograph. Now coming to the use of the labor care guide how to use it? It should be from labor monitoring just no observation and monitoring of the labor events to action, action when only and only when it is indicated. So, first you assess, assess regularly at regular intervals at as recommended, assess the well being of the mother and the baby and the progress of the labor ok. And you record those events right on that paper and now you compare, compare with the reference threshold that is in the alert column. So, compare with the reference threshold and know in the alert column and if the alert column values that are present.

So, you know there is need for alertness. So, that you encircle and then you plan, you decide whether and what interventions are required in consultation with the woman obviously, and then document it accordingly and according to the agreed plans you function ok. So, that is the motto of the WHO labor care guide. So, recording and reviewing the observation against the references given in the alert column to think critically and avoid unnecessary intervention ok. Unnecessary intervention should not be done. Act only on warning signs as given on the alert column, documentation of the shared decision right.

So, documentation is very very important regarding the shared decision or the communication to address any deviation from the normal progression of labor and to intervene only and only on observation of a deviation from the expected course of labor right. So, that was regarding the WHO modified partograph which you know involves respectful maternity care, effective communication. So, effective communication, labor observation mostly, monitoring the labor events and intervention only when indicated. It also involves new born care that is suctioning, then rubbing, giving you know warmth to the baby and also initiating breastfeeding and ultimately the care of the mother immediately after birth. What are the salient features or the changes made in the modified partograph? It starts from 5 centimeter of cervical dilatation which is the start of active phase of first stage of labor.

And there is no alert line or action line in the new partograph, but a alert column has been added. And the second stage of labor is also plotted right. In the previous partograph we have you know we only monitored the first stage, no event monitoring or no event plotting is done in the second stage. But here we second stage is also being monitored and plotted on the same graph. And what are the things that WHO does not recommend? Admission CTG, perineal routine perineal shaving or giving per rectal enema at the time of admission not recommended, routine clinical pelvimetry at the time of admission not recommended, routine episiotomy.

Episiotomy for every woman who are going for vaginal delivery it is not recommended, it should be given only in special cases where episiotomy is needed. Cervical dilatation threshold of 1 centimeter per hour for assessment of normal labor is now an absolute thing right. We have discussed that as per the centimeter dilatation of cervix or cervical os we need to we have that you know duration of time. So, if that duration of time exceeds then only we are concerned or we are alert ok. Any intervention to terminate the labor before 5 centimeter of dilatation, before the first stage of labor, first stage active phase, before the active phase of first stage of labor we are not going to decide right caesarean section because of non progression of labor.

So, no NPL diagnosis should be done before 5 centimeter dilatation. Routine amniotomy routinely early amniotomy or early oxytocin infusion or giving antispasmodics in the form of drotin, buscopan, tramadol is not recommended. Early IV fluids is also not recommended. Routine oxytocin infusion know if the mother is going for epidural analgesia routinely know go giving her oxytocin to prevent the delay of labor is not recommended. Just observe if it is normally progressing then no need to go for oxytocin infusion.

Uterine massage of the birth no it should not be done. So, control cord traction is recommended right, but uterine massage after birth is not recommended and very very important that is manual fundal pressure during the second stage right. Sometimes you know in labor room we see that someone is giving a fundal pressure and the during the second stage for expediting the delivery of the head of the baby, but that is not recommended. Usually ask the mother to bear down when the uterine contractions is going and when you see crowning there you know you try to tell the mother not to bear down or not to push now because the fetal head needs to be delivered during you know in a controlled manner to prevent any unnecessary damage to the fetal head to prevent any intracranial hemorrhage as well as to prevent any type of perineal laceration or injury in the perineum of the mother. So, fundal pressure during second stage is strictly prohibited. So, these are the things which we need to remember during you know a delivery in the labor room and we need to avoid these things so as to you know give the mother a positive birthing experience as well as at the end to have a healthy baby as well as a healthy mother ok.

So, that was all regarding the intrapartum monitoring of mother and baby as per the new WHO labor care guide right and the references are from Williams book of obstetrics the 26th edition as well as the WHO labor care guide users manual ok. So, that was all right. So, thank you and hope I have been able to give you an overview regarding the intrapartum care monitoring of mother and baby. Thank you.