

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

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## **Abnormal Labour**

Hello students. Welcome you all to the NPTEL online certified course on the topic an overview on maternal health, the antenatal, intranatal and postnatal care. I am Dr. Barnali Ghosh an obstetrician and gynecologist working as assistant professor at B.C.Roy Medical College and Medical Research Center IIT Kharagpur. Today we are going to discuss regarding abnormal labor. So we have already discussed the normal labor, the four stages of normal labor, the duration, the events occurring in the different stages of labor.

Today's class will be regarding abnormal labor or labor dystocia both terms are synonymous right. So concepts covered will be the different difficulties in labor right and the causes of different difficulties of labor of which malpresentation is a cause right. So the concepts covered are the keywords for this class are as given right. So coming to the class proper.

Normal labor abnormal labor or labor dystocia. So normal labor we know that it is the process which starts from the onset of rhythmic regular uterine contractions associated with or accompanied with cervical effacement and dilatation and ultimately ending with the birth of the baby as well as the expulsion of placenta and after membranes. And also one hour post delivery is the observation period which is also included in the fourth stage of labor. So we have all discussed. Now today we will be discussing any deviation from these normal progress of labor and what are the causes for this deviation from the normal course of labor.

So there can be three factors which know mainly when works in synergy or in synchronization that will result in smooth progress of labor and in an uneventful delivery thereby leading to the birth of a healthy baby as well as a healthy mother. So what are the causes for abnormal labor? There are three causes I have told that any difficulty or any deviation from the normal path in power passage and passenger. What is power? Power is uterine contractility. So uterine contractility it should also be in you know synchrony starting from the fundus the two cornu there are the two pacemakers and from these pacemakers the uterine contraction start and they gradually gradually descend downwards right in the lower uterine segment. So this synchrony should be maintained and the duration the intensity the frequency of uterine contraction

increases as the labor progresses.

So in case of any abnormality in uterine contractility like in case of hyper contractility or hypotonia both excess or you know less both are abnormal. Next is the passage, passage meaning mostly the bony pelvis and the soft tissues. So any difficulty in the bony pelvis right it may be so that it may be a contracted pelvis, narrow pelvis or it may be a case of cephalopelvic disproportion where the baby is very big macrosomic baby and it cannot pass through a average sized pelvis or it may so happen that you know the pelvis is contracted with an average size baby both the cases it is a case of cephalopelvic disproportion and third is the passenger, passenger meaning the fetus itself right. So any change in position of the fetus any change in position in attitude of the fetus, fetus is always in well flexed attitude so when it is you know extended or partial flexion or partial extension all these different you know attitude which are apart from flexion all the presentations which are you know apart from cephalic presentation, in breech presentation, in transverse like you know we will go through all of them so all these can lead to abnormal labor and that you know needs to be diagnosed very early and sometimes you know even if there is certain there may be some degree of cephalopelvic disproportion but still we go for trial of labor, we go for the vaginal delivery and we have to be vigilant whether you know the vaginal delivery can occur by you know by adaptation both in a pelvis you know giving way of the pelvis, in the fetus there will be molding thereby decreasing the diameters of the fetal head and also the uterine contractility it should be sufficient to cause the fetal descent. So all these factors taken together will lead to the normal progression of labor.

Now coming to the patterns of abnormal labor what are the patterns it can be two there can be an abnormal latent phase we have already discussed what is latent phase it is the phase which is before 5 centimeter of cervical loss dilatation starts with the true onset of labor up till 5 centimeter cervical loss dilatation is the latent phase an active phase from 5 centimeter to full dilatation these are the two phases of first stage of labor. So, it can be an abnormal latent phase an abnormal active phase an abnormal active phase can again be divided into protracted disorder where there is progress but there is slow progress right there is progress of labor, but it is slow and arrest disorder meaning no progress at all right. So, these are the patterns of abnormal labor. Now coming to the first point we will go in detail the three points that is the passage the power and the passenger. So, coming to the passage which is actually comprising of the bony pelvis and the soft tissues right.

So, there are two definitions number one is the contracted I have told contracted pelvis and cephalopelvic disproportion what is contracted pelvis where the essential diameters of one or more plane of the maternal pelvis is shortened by 0.5 centimeter. So, here you can see this is the maternal pelvis right and the pelvis has three planes the pelvic inlet the pelvic cavity which is inside and this is the pelvic outlet right. So, any the and we have already discussed the diameters of pelvic inlet the cavity and the outlet. So, the essential diameters of which inlet is the obstetric

conjugate the pelvic cavity is the inter ischial diameter.

So, these are the two ischial spines you can see this is one ischial spine and here this is the other ischial spine. So, the inter ischial diameter is the diameter of the pelvic cavity and the outlet the outlet has the inter tuberos diameter between the two ischial tuberosities. And these diameters when they are shortened by 0.5 centimeter right and know the definition says that there may be change in shape or size or both of the maternal pelvis to a sufficient degree so as to alter the process of labor right. In a case of average sized baby, anthropoid, android and platypelloid.

Gynecoid is most common it is seen in 50 percent of Indian females, anthropoid is seen in 25 percent, android seen in 20 percent of Indian females and platypelloid is least common it is seen in 5 percent of Indian females. Now, just to note here platypelloid pelvis is called so called as flat pelvis, android pelvis is called as heart shaped. See the structure of the pelvic inlet it is a shape of the heart. So, heart shaped right narrow pelvis. Anthropoid will come one by one, but gynecoid is somewhat roomy right.

We can always go for normal labor as well as normal delivery without any difficulty mostly in gynecoid pelvis. So, these are the four types of maternal pelvis as per Caldwell-Molay classification. Now, coming to one by one first the pelvic inlet this is the pelvic inlet, then the pelvic cavity and ultimately the pelvic outlet. So, coming to the pelvic inlet what is there in gynecoid I have told it is roomy right and see this is the transverse diameter, this is the AP diameter. So, it is somewhat you know round where the transverse diameter is a little larger than the anteroposterior diameter ok.

Number 2 sacral angle. So, you know this you can say it is a gynecoid right. So, it is roomy and the transverse diameter is somewhat larger than the anteroposterior diameter and the sacral angle the sacral promontory making an angle with the horizontal right. So, the sacral angle is sacral angle is more than 90 degrees in case of gynecoid pelvis right. So, these are the pelvic inlet points in gynecoid in anthropoid you can see this is the anteroposterior diameter and this is the transverse diameter.

So, anteroposterior diameter here is larger here is larger than the transverse diameter. See anteroposterior AP just from this you can remember AP diameter is more in case of anthropoid sacral angle yes it is more than 90 degrees and sacrum is inclined posteriorly right. In android I have told it is heart shaped. So, android pelvis is heart shaped narrow pelvis and see the posterior sagittal diameter posterior sagittal diameter is that part of the anteroposterior diameter which is behind the transverse diameter. So, this is the this part this is the posterior sagittal diameter posterior sagittal diameter is short and sacral angle is less than 90 degree sacrum is inclined anteriorly and also anteriorly this space anteriorly you have this space and this

anteriorly this space is also narrow anterior space is narrow right which leads to west space of Morris being more west space of Morris is more right.

So, here the inlet in case of android pelvis is heart shaped it is narrow and this will you know have a waste space of Morris anteriorly. So, when it passes when the head passes during the engagement during the engagement when the head passes the anteroposteriorly it is you know narrowed. So, there the available space for the head to go inside is you know narrow it is in the posterior segment and it is also short and narrow and anteriorly we have this space which is the waste space of Morris which is very marked in case of android pelvis and this is a waste space because this is not coming in any value it has no value because through this part because it is beak shaped it right android pelvis is beak shaped. So, anteriorly the head cannot negotiate. So, it is you know it prevails engagement.

So, there is delayed engagement in android pelvis also there will be more difficulties in android pelvis in the process of labour. So, this was for the inlet and lastly is the platypelloid pelvis. Platypelloid pelvis is transversely oval it is transversely oval see here this is the transverse diameter this is the anteroposterior diameter and here the transverse diameter is much much more bigger than the epi diameter it is a flat pelvis. So, the anteroposterior diameter is shorter in case of platypelloid pelvis and this being the anteroposterior diameter being shorter this is short. So, that is the available space for the fetal head to pass during the process of engagement when it just goes down into the maternal pelvis.

So, engagement is delayed in case of platypelloid pelvis, but once engagement occurs there is no difficulty in progress of labour. So, this type of pelvis is ideal for trial of labour. What is trial of labour? Where we suspect that there can be some difficulty in the form of difficulty in engagement, but with time due to you know adaptations both in case of maternal pelvis as well as the fetal head there they will negotiate and the fetal head can pass through that pelvis. So, ultimately trial of labour is you know successful only when the delivery occurs in the vaginal route and it ultimately ends in the result of a birth of a healthy baby as well as a healthy mother right. So, platypelloid pelvis mostly we go for trial of labour because we know that the fetal head will have rotatory movement right.

There will be rotatory movement in the form of asynclitism and it will try to negotiate to through the smaller anteroposterior diameter of the platypelloid pelvis right. So, it will negotiate itself it will rotate and it will try to negotiate and go down and once engagement has occurred once the biparietal diameter has crossed the pelvic inlet then ultimately there will be no difficulty in labour right. So, that was regarding the pelvic inlet. Now, coming to the pelvic cavity. In cavity C we have already discussed that android pelvis is mostly narrow pelvis.

So, these pelvic sidewalls are converging right. So, if you say sidewalls, sidewalls are we will

just write the important points here they are converging. Rest you can see they are parallel, they are divergent, here also it is divergent right and the sacrosciatic notch you know this is the sacrosciatic notch right. So, this sacrosciatic notch is more pronounced it is deep and narrow in case of android pelvis, but in gynecoid it is shallow, in anthropoid also it is small narrow right. So, here only the sacrosciatic notch, sacrosciatic notch is deep and narrow in android pelvis deep and narrow, but in others it is wide and shallow these will not alter the course of labour right it is narrow and, but, but, but they are wider right not narrow I will say it is shallow, shallow, but this will be deep and narrow which will have difficulty in the fetal descent it will be you know it will cause difficulty in the fetus to negotiate through the pelvic cavity in case of android pelvis.

Ischial spines are prominent in case of android pelvis. So, that was regarding the pelvic cavity in others spine is normal it is not so much prominent right. Now, coming to the outlet, outlet you have again 3 points this is the sacrosciatic notch right. So, here you can see it is you know wide it is wide right it is wide it may be shallow, but it is wide, but here you see it is narrow it is narrow and deep narrow and deep I will put this I will erase this now this red colour you can see this is narrow and deep sacrosciatic notch right. Now, coming to the pelvic outlet, pelvic outlet we have the sub pubic arch.

So, this is the pelvic outlet outside right now this is the sub pubic arch below the pubis this is the sub pubic arch this sub pubic arch this we have to palpate in the mother right and when the sub pubic arch comes in between these 2 fingers the index and the middle finger right. So, this means it is narrow when it is like this it is more wider we coming in between the thumb and the index finger when we place like this and it comes between the thumb and the index finger then it is wide right. So, in this case I will say that in this pelvis the sub pubic angle is narrow right another is the sub pubic arch sorry this is the sub pubic arch and this is the sub pubic angle and this angle is narrow less than 90 degree it is narrow in case of android pelvis and it is no larger wider more than 90 degrees in platypelloid pelvis. So, that was the pelvic outlet right. So, these are the different types of pelvic maternal pelvis and depending upon the shape the diameters we have studied the 4 types of maternal pelvis right.

So, I will write here the sub pubic angle in gynecoid it is around 85 right in anthropoid it is normal right here it is narrowest in android and in platypelloid it is widest more than 90 degree. Another is the bituberous diameter or the ish to be the diameter between the two ischial tuberosity this is called as the transverse diameter of the outlet TDO this is decreased in case of android pelvis right. So, in a nutshell you can say that android pelvis is contracted pelvis and this is notorious android pelvis as it is contracted it is notorious for deep transverse arrest it will have arrest in the deep in the pelvis at the level of ischial spine because the ischial spines are very prominent it is narrow the sidewalls are converging and that will prevent internal rotation of the fetal head as well as further descent of the fetal head leading to deep transverse arrest. So,

mostly in android pelvis we cannot go for normal delivery we need to go for caesarean section in case of gynecoid yes it is roomy pelvis and we can go for vaginal delivery very well right. So, if all things are normal the uterine contraction is normal the fetal attitude the fetal position is normal and there is normal progress of labor we can go for vaginal delivery.

In anthropoid see in anthropoid we have noted that it is anteroposteriorly oval right. So, the anteroposterior diameter of the pelvic inlet is larger. So, what will happen when the fetal head engages because it is anteroposteriorly oval this internal rotation will be hampered. So, there may be there it may so, occur that there is no internal rotation and the fetal head you know if this is I will draw it with another color. So, if this is the fetal head say the position of the fetal head it may so, happen that the occiput is posterior.

So, here direct occiputoposterior direct occiputoposterior position is more common in case of anthropoid pelvis and this will be delivered by face to pubis delivery. These are you know chapters which you know not which are not included in normal labor. So, it has not been included in our course, but you know you need to know that there is also a position called as that occiputoposterior where the occiput instead of being behind the symphysis pubis anteriorly it will be you know just in front of the sacral promontory. So, that is occiputoposterior position and in that case if delivery has to occur vaginally it is by face to pubis delivery and this occurs in you know mostly or more commonly in anthropoid pelvis. In platypelloid pelvis we have discussed it is ideal for trial of labor because there is difficulty in engagement difficulty in engagement and once engagement occurs in asynclitism position after that normal labor or progression of labor can be smooth.

So, platypelloid pelvis mostly engagement is delayed in asynclitism position, but after the engagement occurs it is corrected and then there will be delivery by the vaginal route. So, that was the types of pelvis. Now, coming to you know assessment of pelvis assessment of the maternal pelvis beforehand is you know crucial because we need to have an idea whether it can go for normal delivery or not and what are the types or what are the methods number one is clinical pelvimetry which we do for by clinical examination and others are by investigations that is x-rays it is scan and MRI. So, mostly they are done before the female becomes pregnant because during pregnancy these should not be done. So, firstly you know mainly we will stress upon the clinical pelvimetry.

What are the points in clinical pelvimetry? So, this is only by clinical examination we go for you know examination of the maternal pelvis during the labor or just prior to the labor. Number one is the sacral promontory mostly sacral promontory is not palpable right. When we go for examination I have shown you to you know measure the diagonal conjugate where we go below the sub pubic arch and try to locate the sacral promontory. So, you know ideally or in case of roomy adequate pelvis sacral promontory is usually not reached right. Next is the sidewalls the

pelvic sidewalls or the anteroposterior wall.

The pelvic sidewall should be smooth the lateral wall should be smooth from side to side there should not be any bony projections right I will show it here. So, this is say so, this you can see this is the sacral promontory. So, when we try to palpate when part vaginally the mother is in you know lithotomy position. The mother is in lithotomy position it is in empty bladder and you go for pelvic examination after taking consent and then you go just below the pubic arch and you try to go behind right. You put your hand low down and you try to go go go and try to palpate the your sacral promontory, but ideally in case of adequate pelvis you cannot reach the sacral promontory right.

This is number one. Next when you cannot reach you say that yes the pelvis is adequate. Next is the pelvic sidewalls see these are the pelvic sidewalls. So, these should be smooth with your hands or with your fingers part vaginal examination with your part vaginal fingers you will palpate the sidewalls whether they are any you know bony prominences also the anteroposterior the posterior sacral curvature anteriorly just behind the pubic symphysis you will you will palpate. Then what we will see next you will be seeing the sacrosciatic notch. So, this is the sacrosciatic notch and here you will see now you will again try to go behind behind behind and in this sacrosciatic notch if it accommodates two fingers then it is ok right.

Then is the iliopectineal line. So, this is the iliopectineal line and this iliopectineal line should be smooth then will be your pelvic cavity coming to the pelvic cavity you will palpate the ischial spine on two sides and it should not be so much prominent right. Then you will go down and you will palpate the coccyx right and coccyx if it is anteriorly you know there is a beaking or hook of the coccyx anteriorly that is not good for normal delivery. So, here in this pelvis the coccyx is very much anteriorly pointed. So, that is not good right and outlet we will well see the sub pubic angle right we will place our two fingers in the sub pubic arch right in the two pubic arches on two sides here it comes between the index and the middle finger, but for the pelvis to be adequate it should be in between the thumb and the index finger.

So, it will be like this. So, this pelvis the sub pubic arch is narrow the sub pubic angle is narrow you can see because it is coming in between the middle finger and the ring finger right and ultimately the distance between the two ischial tuberosities which is the transverse diameter of the outlet or the bituberous diameter which will accommodate the fist the closed fist of the examiner. So, this will accommodate the closed fist of the examiner in between the two ischial tuberosities that is the four knuckles of the right hand and if it accommodates then it is adequate pelvis. So, these are the points in clinical pelvimetry which we see and assess the pelvis maternal pelvis whether it is adequate for adequate or not. So, coming to the point sacral promontory the pelvic sidewalls and the anteroposterior walls the sacrosciatic notch the ischial spine whether they are prominent or not then the iliopectineal line the coccyx whether it is

pointed anteriorly or not the pubic arch and the sub pubic angle whether you know this if this is the pubic arch here you have the examiner's right hand. So, this is the index finger my drawing is not so much good, but just to know that this is index finger and this is the middle finger.

So, it is coming between the index. So, this is narrow right, but if say it is like this where the thumb and the index finger is coming right. So, this is the thumb and this is the index finger when it comes in between these two then it is wide the sub pubic angle is wide. And lastly is the transverse diameter of the outlet that is the TDO or the bi-transverse bi-tuberous diameter which will accommodate the closed fist or containing four knuckles of the right hand of the examiner. So, after the clinical pelvimetry we need to go for contracted pelvis. What is contracted pelvis? Now, we have done clinical pelvimetry.

So, we will discuss now from the inlet what is in the inlet the transverse diameter of the inlet should be less than 11 centimeter obstetric conjugate we have all discussed all these diameters the definitions. So, obstetric conjugate should be less than 10 centimeter at least it should be 10 centimeter when it is less than 10 centimeter it is called as the your contracted pelvis. And diagonal conjugate which we measure clinically diagonal conjugate here in case of contracted pelvis is less than 11 centimeter I am very sorry this transverse diameter this is less than 12 centimeter right greatest transverse diameter. So, that was for the inlet. Now, coming to the mid pelvis mid pelvis what is the definition of contracted pelvis the inter ischial diameter inter ischial diameter is less than 8 centimeter.

And another we have the inter ischial diameter and the posterior sagittal diameter right this should be less than 13 centimeter in normally the inter ischial or the inter by spinous diameter is 10 centimeter posterior sagittal diameter is 5 centimeter. So, it is equal to 15 centimeter normally inadequate pelvis in contracted pelvis it is less than 13 centimeter. And lastly the in pelvic outlet the transverse diameter of the outlet will be less than 8 centimeter right. So, this was all regarding the definition of contracted pelvis.

So, we have completed the pelvis right. Now, coming to power what is power? Power is uterine contraction. So, we have discussed that yes the uterine contraction starts from the fundus here there are 2 pacemakers where the uterine contraction starts and comes down in wave patterns you know low down below down right. And it increases in intensity, but these all contraction these all waveforms of uterine contraction should act in synergy right when the upper segment is contracting the lower segment will be you know dilating. So, these will all act in synergy for the normal descent of the fetal head right during the process of labor. And another thing is the CTG probe this is the CTG probe which is placed over the fundus to note the uterine contraction intensity right.

So, that was uterine contraction number 1 power and number 2 is the maternal expulsive force

or the bearing down effects which comes into play only in second stage of labor second stage of labor right. So, these 2 will be forming the power. Now, how to assess this uterine contraction or power? So, number 1 is by abdominal palpation you put your hand over the abdomen of the patient and you palpate right. So, you palpate the number of contraction you palpate the frequency of contraction now how frequently it is coming right, but you cannot palpate here the intensity of contraction that is not possible clinically by just putting the hand over the uterine musculature. So, that you cannot palpate that can be palpated by the external tocodynamometry right which is the uterine probe in CTG right.

And also see you can here also palpate the duration how long the duration is persisting for how many seconds, but intensity can be noted in CTG probe right. And ultimately we can go for accurate measurement of the intrauterine pressure by intrauterine pressure catheter, but here it is invasive it requires amniotomy, it requires rupturing of membrane and thereby placing the catheter inside the uterine cavity it is invasive there is chance of infection and it is not usually done. So, that was the assessment of your uterine power contraction power. Now, coming to two different terminologies number one is hypotonic the contraction power can be less or can be more what is hypotonic the frequency is less than 3 contraction per 10 minutes the duration is less than. So, duration and intensity frequency less than 3 contractions duration less than 40 seconds and intensity is less than 25 millimeters of hg all these three when you know is present.

So, duration that is persisting for less than 40 seconds and in 10 minutes there are less than 3 contractions right intensity is also less. So, that is hypotonic uterine contraction and most common cause of hypotonic uterine contraction is cephalopelvic disproportion sometimes macrosomia over distended uterus right obesity then your you can say polyhydromnios that is also due to over distension you know chorioamnionitis infection all these can lead to hypotonic uterine contraction and what is the treatment we will go for amniotomy we will go for rupture of membranes to expedite the release of prostaglandins from the uterine musculature and also try to augment labor with oxytocin infusion. But very importantly you should know that before doing this treatment you must exclude cephalopelvic disproportion if there is cephalopelvic disproportion or malposition of the fetus then the treatment is LSCS cesarean section that should not be any vaginal delivery and number 2 is hypertonic where the uterine contraction is more meaning more than 5 contraction per 10 minutes right and duration of one single contraction is more than 2 minutes. So, this is tachysystole this is called as tachysystole and this is called as uterine hypertonus. So, tachysystole when more than 5 contractions coming in 10 minutes and hypertonic uterus is when the duration of one single uterine contraction is more than 2 minutes and when you know one or two is present along with fetal heart rate abnormality it is called as uterine hyperstimulation.

So, all these cases we will try to decrease in case of hypertonic uterine contraction we try to stop oxytocin if it was being infused we try to give the mother fluids we try to first make the

mother left lateral position we will exclude any chances of cord prolapse and then we can administer subcutaneous terbutaline injection 0.25 milligram right. So, this is the treatment for hypertonic uterine contraction. So, that was regarding you know power right. So, we have discussed the passage that is the bony pelvis now the power or the uterine contraction.

Now, coming to the passenger, passenger what is the difficulties? So, passenger meaning the fetus itself. So, any abnormality in the fetus right. So, number one is malpresentation right. So, number one is malpresentation, malpresentation meaning apart from cephalic presentation right. So, apart from cephalic presentation it can be breech presentation it can be transverse lie it can be shoulder presentation transverse sorry transverse lie it can be shoulder presentation.

So, all these apart compound presentation there are different presentations which are not cephalic where the fetal head is not covering the lower uterine segment it may be the podalic end discovering or the fetus is in transverse lie. So, that will also lead to malpresentation and malposition is when the fetal head is not well flexed. So, what is well flexed? That means, the vertex, vertex will be overlying the internal os. So, malposition are all the non vertex presentation, non vertex meaning brow it may be face presentation. So, all these are malposition and lastly for the fetus if there is severe asynclitism or marked asynclitism I have told that asynclitism the fetus there is rotatory movement of the fetal head just when it goes inside the maternal pelvis right to you know accommodate and get engaged and after the engagement occurs the fetal head with inside the maternal pelvis due to adequate uterine contraction there is correction of this asynclitism and thereby leading to normal progress of labor.

Sometimes it may so happen that there is marked asynclitism and it is not corrected it remains uncorrected even in the mid pelvis. So, in this type of asynclitism it will not result in smooth progression of labor and ultimately it will cause labor dystocia right. So, that was all regarding passenger. Now, coming to two important terminologies the latent phase prolongation we know this is the onset of labor and as per WHO 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10.

So, these are the cervical dilatation right cervical OS findings. So, up to up to your 5 centimeter this is the latent phase right. So, this latent phase it when the duration of latent phase is more than 20 hours in case of prime or more than 14 hours in case of multi then it is called as the latent phase is prolonged. And what is the treatment very important you know just recent recommendation is no sedation to be given to the mother very important you need not give any sedation any type of analgesics try to go just monitor just observe right you know and no decision no decision for caesarean section to be taken in the latent phase of labor. So, we must know assess if the fetus condition fetal condition is normal caesarean section is not to be done on the indication of latent phase prolongation. Now, as a treatment we can go for amniotomy or oxytocin infusion right if the situation demands.

So, that this we can do. So, that was latent phase prolongation. Now, coming to active phase active phase what is the active phase after the latent phase this is the active phase from 5 centimeter dilatation to 10 centimeter dilatation or full dilatation of the cervix right. So, the active phase it may be to again to abnormality slow progress it is progress in, but the progress is slow right. So, this is known as protraction disorder. So, what is the definition of slow progress? That means, in primi the cervical dilatation is less than 1.2 centimeter per hour and in multi the cervical dilatation is less than 1.5 centimeter per hour this is cervical dilatation. And, what about fetal head descent? Fetal descent is less than 1 centimeter per hour in primi and also same in multi it is less than 1 centimeter per hour, but it is occurring, but it is in lesser extent slowly it is progressing. So, that is a protraction disorder and what is arrest? Arrest meaning there is no progress at all. So, no progress at all in primigravida arrest of dilatation no dilatation at all for 2 hours, no dilatation at all for more than 2 hours and arrest of descent no descent at all for more than 1 hour both in primi or multi.

So, this is the definition of arrested progress right. So, these are the two types and what are the your treatment. So, coming to the treatment part for protracted disorder in case of protracted disorder right if there is less dilatation less fetal descent we need to rule out CPD number 1 and number 2 if it is less uterine contraction we can go for oxytocin infusion right. And, arrested disorder no arrest at all then also there is chance of CPD or else we will expedite or augment the labor by oxytocin infusion by stripping the membranes by doing amniotomy so, ultimately tri augmentation of labor. Recently there has been change in the definition of arrested progress which says that even after rupture of membranes and in presence of adequate uterine contraction if there is no progress of active phase for next 4 hours right for next 4 hours in presence of good uterine contraction there is no progress then it is arrested active phase or number 2 definition is there is less uterine contraction you have given oxytocin and even after oxytocin infusion for next 6 hours there is no progress then we also it is a case of arrested active phase disorder. So, that where the active phase disorder now the recent recommendation or the obstetric care consensus there are 4 consensus right I will just you know repeat what I have already told that number 1 is caesarean section decision cannot be done in the latent phase of labor.

If there is prolonged latent phase it is not an indication for caesarean section no sedation to be given to the mother, but if it is prolonged we can go for medication in the form of amniotomy or oxytocin infusion this is number 1 right. Number 2 what is number 2 that the caesarean section is not a treatment or not a decision in case of slow progress of active phase that is in protraction disorder caesarean section is not decided in case of protraction disorder because the progress is occurring, but it is slow. So, we must go for augmentation of labor in the form of oxytocin or amniotomy right. So, mostly expectant management. Number 3 is your active phase now I have told that WHO has defined active phase from 5 centimeter, but recently it has been modified an active phase starts from 6 centimeter of cervical dilatation.

And number 4 are the 2 definitions of arrest disorder which is your in case of rupture of membranes with adequate uterine contraction there is no progress or no your dilatation no descent for next 4 hours or if the uterine contractions were low you have given oxytocin infusion, but even after oxytocin infusion for the next 6 hours there is no progress in dilatation or descent in these 2 conditions the both are the definitions of arrest disorder right. So, that was all for your abnormal labor what is abnormal labor what are the causes of abnormal labor and ultimately latent phase prolongation active phase protraction or active phase arrest and what is the treatment if say it is active phase arrest then always we go for cesarean section we will not go for vaginal delivery. So, first stage is done second stage we know the what is arrest when there is no delivery in the second stage for at least 3 hours in primi gravida. So, no progress of second stage or no delivery of the fetus in second stage for 3 hours and for 2 hours in multi gravida. So, this is second stage arrest and here also treatment is expedite the delivery by instrumental delivery forceps or vacuum right.

So, it is second stage the fetal head has already come down if it so happened that the station is plus 5 then we will go for outlet for cep delivery right. So, that was all references has been taken from D.C.dutta book of obstetrics Williams obstetrics and James book on high risk pregnancy. So, thank you for your patient hearing and keep reading keep taking notes. Thank you.