Fetal cephalic malpresentation and malposition

Patient Information Series – What you should know, what you should ask.

What are cephalic malpresentations and malpositions?

During labor, the baby's head (cephalic) is usually the first part entering the birth canal. The baby is usually looking at the maternal back, with the back of the head (occiput) towards the maternal pubic bone. This position is known as occiput anterior, and is the most physiological position to deliver a baby. If the baby's head is in any other position during labor, the condition is called cephalic malposition.
Most of the babies enter the birth canal with the chin close to the chest (flexion of the baby's head). This allows the baby to accommodate the head with the shortest possible diameters to descend through the birth canal. If the baby extends the head, then the baby's forehead or face are the first to enter the birth canal. This condition is known as cephalic malpresentation or deflexion.

Why do malposition or malpresentation occur?

It is not known why these conditions happen. Most of the patients have some risk factors, which predispose them to any of these conditions. However, these conditions might also present in patients without risk factors. Some of the common risk factors include: anatomical differences in the maternal uterus, twin pregnancies, small or big babies, increased amniotic liquid, among others.

Can it be reliably diagnosed?

Traditionally, doctors have always used their examining fingers to assess the position and the degree of flexion of the baby's head during a vaginal examination. The main limitation of this exam is that it is subjective and may be uncomfortable for the patients. Recently, ultrasound has been introduced into the labor ward with the aim of improving its accuracy of the vaginal examination. Ultrasound can fast and reliably identify the baby's position and presentation, and several studies showed that the accuracy is higher compared to vaginal examination

Are malpresentation and malposition dangerous conditions?

If labor is progressing normally, most of these conditions will resolve spontaneously without any type of intervention. Contrarily, if these conditions persist throughout labor, they can lead to prolonged labors, an increased risk of operative delivery and other outcomes affecting the mother and the baby. Therefore, monitoring these conditions is important and it might require more examinations (vaginal examination or ultrasound), compared to normal labors.

Is there anything to do to prevent an operative delivery?

In the case of malpresentations, unfortunately not. The management usually involves waiting for the spontaneous resolution of the condition. However, if persistent, the correct management usually involves Cesarean section.

For malpositions, the doctor might attempt to manually rotate the baby's head to correct the malposition and increase the probabilities of a vaginal delivery. This intervention is mostly safe for the mother and the fetus and has a 50-60% chance of being successful. However, it might be uncomfortable for the mother, as the doctor might need to introduce a hand into the vagina.

How are these conditions managed during labor?

These conditions can be encountered throughout labor. Management of malpresentations is straightforward, as there is no known intervention besides cesarean section to correct the baby's head deflexion. It is common practice to monitor the progression of labor despite the presence of a malpresentation, as many of these conditions will correct spontaneously during labor. Persistence of this condition usually leads to prolonged labors and cesarean section. However, if the baby's face is presenting, spontaneous vaginal delivery is possible, as long as labor progresses normally. After vaginal delivery, the baby's face is usually swollen but it recovers quickly after a couple of hours.

Regarding fetal malpositions, management differs depending on the stage of labor. During the early stages of labor, the baby's head position does not necessarily affect the outcome of labor. Over 50% of fetuses begin labor with the head facing towards the maternal pubic bone and rotate spontaneously.

If you experience a prolonged early labor or the cervix does not dilate correctly, the doctor might need to perform a Cesarean section. Contrarily, if you are diagnosed with prolonged labor in the advanced stages, the doctor might perform an operative vaginal delivery, if the baby's head has descended far enough into the birth canal. An operative vaginal delivery refers to the use of instruments (forceps, ventouse/vacuum)) to help the baby's head out. In such cases, ultrasound might assist in the correct assessment of the baby's head position before the intervention.

If the baby's head has not descended far enough down into the birth canal or the intervention fails, the doctor might perform a Cesarean section to deliver the baby.

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