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Ultrasound in labor and delivery

Abstract:

Background: Ultrasound in the delivery room, also known as ultrasound in labor, is a valuable tool used by healthcare providers to monitor the progress of labor and plays a crucial role in monitoring fetal development and ensuring a safe delivery process. It allows obstetricians to visualize the baby's position, estimate gestational age, monitor fetal heart rate, and detect any complications that may arise during labor, such as placental abnormalities or umbilical cord compression. Ultrasound technology provides real-time imaging, enabling medical teams to make informed decisions during labor and delivery such as determining the need for interventions like cesarean delivery or instrumental assistance. By providing real-time imaging, ultrasound helps ensure the safest possible outcome for both mother and baby during the childbirth process.

Objective: To provide an overview of current publications and the overall applicability of ultrasound in the delivery room, taking into account all stages of labor. And also provide data analysis to assess the effectiveness of the use of ultrasound in a continuous mode, in obstetrics and gynecology. **Methods:** The review provided includes an analysis of scientific articles published in the Medline, PubMed and Cyberleninka databases published over the past 5 years.

Results: Several recent studies using both two- and three-dimensional ultrasound have now described objective measures of progression of the fetal head during labor. In instrumental deliveries an important determinant of a successful and safe use of vacuum and forceps is the correct determination of the fetal head position and appropriate application of the instrument.

Conclusion: In the field of evidence-based medicine, there is still limited research into its various possible uses during childbirth, but it is expected that further research may lead to improved maternal and newborn health care during childbirth. However, ultrasound studies have shown that digital examination before instrumental delivery fails to identify the correct fetal position in a high proportion of cases. The use of ultrasound is of crucial importance in performing a safe operative delivery and can help in the prediction of whether a vaginal delivery would be successful

Biography

Assel Yeskarayeva has her expertise on ultrasound controlling of delivery process and enhances prenatal care by providing valuable information to support maternal and fetal well-being, ultimately contributing to better outcomes for both mother and baby. Her intrapartum sonopartogram can guide medical interventions such as the appropriate use of oxytocin to augment labor, the timing of amniotomy (breaking of the water), or the need for assisted delivery techniques like vacuum extraction or forceps delivery. These interventions, when used judiciously and appropriately, can help optimize the chances of a successful vaginal delivery.