

The Role Of Ultrasound In Diagnosing Placenta Accreta In Women With Placenta Previa And Prior Cesarean Delivery

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I. INTRODUCTION

Placenta accreta is a serious pregnancy complication where the placenta grows too deeply into the uterine wall. This condition can cause severe blood loss during delivery. The risk of placenta accreta increases with the number of previous cesarean deliveries and is particularly high in women with placenta previa, a condition where the placenta covers the lower uterine segment.

Objective

The objective of this study was to evaluate the accuracy of ultrasound imaging in diagnosing placenta accreta prenatally and to assess the impact of the depth of villous invasion on management in women with placenta previa or low-lying placenta and one or more prior cesarean deliveries.

Methods

The study included a systematic review of articles published between 1982 and November 2016. The researchers included cohort studies that provided data on previous mode of delivery, placenta previa or low-lying placenta on prenatal ultrasound imaging, and pregnancy outcome.

Results

The study included 14 cohort studies with a total of 3,889,907 pregnancies. There were 328 cases of placenta previa accreta, out of which 298 were diagnosed prenatally by ultrasound. The incidence of placenta previa accreta was 4.1% in women with one prior cesarean and 13.3% in women with more than two previous cesarean deliveries.

The study found that ultrasound was highly sensitive and specific in diagnosing placenta accreta when performed by skilled operators. The researchers also found positive correlations between the cumulative rates of the more invasive forms of accreta placentation and the sensitivity and specificity of ultrasound imaging.

Conclusion of the study

The study concluded that accurate evaluation of prenatal risk of placenta previa accreta is essential for planning individual

management for delivery. The researchers emphasized the need for developing a prenatal screening protocol to improve the outcome of this increasingly common major obstetric complication.

Implications

The findings of this study highlight the importance of ultrasound imaging in diagnosing placenta accreta in women with placenta previa and a history of prior cesarean delivery. The study also underscores the need for skilled operators to perform the ultrasound and for a comprehensive prenatal screening protocol.

Increasing Incidence and Associated Risks

The incidence of Placenta Accreta has been increasing worldwide, with the number of cesarean deliveries in 2012 estimated at 22.9 million. Cesarean delivery rates up to 19.1 per 100 live births were inversely correlated with maternal mortality ratio, indicating the significant risk associated with this condition. Wide variations in rates of cesarean section and instrumental vaginal delivery across Europe point to a lack of consensus about practice.

The Role of Ultrasound in Diagnosis

Ultrasound plays a pivotal role in the prenatal diagnosis of Placenta Accreta. It is essential for women with Placenta Accreta, as access to the fetus during caesarean delivery is often an issue due to the anterior placental position. In cases of false negative prenatal diagnosis, Accreta placentation may not be detected by the surgeon during delivery, leading to major placental blood loss. Conversely, a false positive diagnosis of Accreta placentation will lead to an unnecessary midline vertical skin incision and a fundal uterine incision, increasing the risks of intra-operative and post-operative complications and the risks of Placenta Accreta and uterine rupture in subsequent pregnancies.

The Importance of Expertise in Diagnosis

The accuracy of ultrasound imaging in diagnosing Placenta Accreta is high when performed by expert operators. However, ultrasound examination is operator-dependent, and single-center studies often overestimate the accuracy of ultrasound because they

are conducted by skilled operators in specialized centers. Therefore, it is crucial to ensure that sonographers performing the routine mid-trimester detailed fetal anatomy ultrasound

examination are adequately trained and skilled in identifying the main ultrasound signs of Accreta placentation.

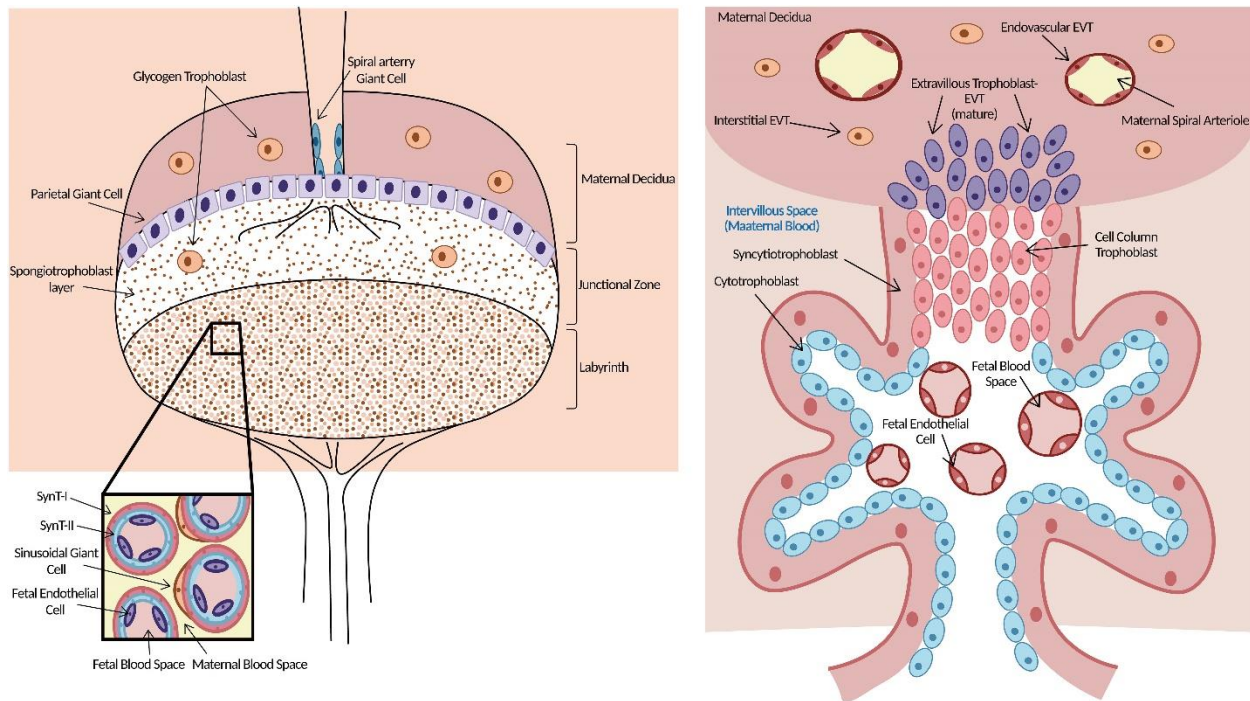


Figure 1

The Need for More Research

While significant strides have been made in understanding and managing Placenta Accreta, there is a need for more prospective data on the accuracy of ultrasound imaging in determining the depth of villous invasion in women diagnosed with Placenta Accreta and its impact on clinical outcome. This will help in further refining the management strategies for this condition and improving the outcomes for affected women.

Conclusion

In conclusion, Placenta Accreta is a serious obstetric condition that requires careful management. Accurate prenatal diagnosis using ultrasound imaging is crucial for optimizing the management and outcome of individual women with Placenta Accreta. With the increasing incidence of this condition, it is essential to develop effective screening protocols and to ensure that sonographers are adequately trained in diagnosing this condition. The increasing body of statistical data and surveys on Placenta Accreta provides valuable insights into the prevalence, risk factors, and outcomes of this condition, contributing to the ongoing efforts to improve maternal health outcomes worldwide.

REFERENCES

- [1] Jauniaux, E., Bunce, C., Grønbeck, L., & Langhoff-Roos, J. (2023). Prevalence and main outcomes of placenta accreta spectrum: a systematic review and meta-analysis. *American Journal of Obstetrics and Gynecology*.
- [2] Jauniaux, E., Collins, S., & Burton, G. J. (2023). Prenatal ultrasound diagnosis and outcome of placenta previa accreta after cesarean delivery: a systematic review and meta-analysis. *American Journal of Obstetrics and Gynecology*.
- [3] Estimated incidence of placenta accreta/increta/percreta for different...
- [4] Frequency of placenta accreta spectrum according to the number of...
- [5] Maternal demographic characteristics in pregnancies with placenta... Maternal and perinatal results of patients diagnosed with placenta...
- [6] Pregnancy outcomes in all women with placenta previa placenta according...

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