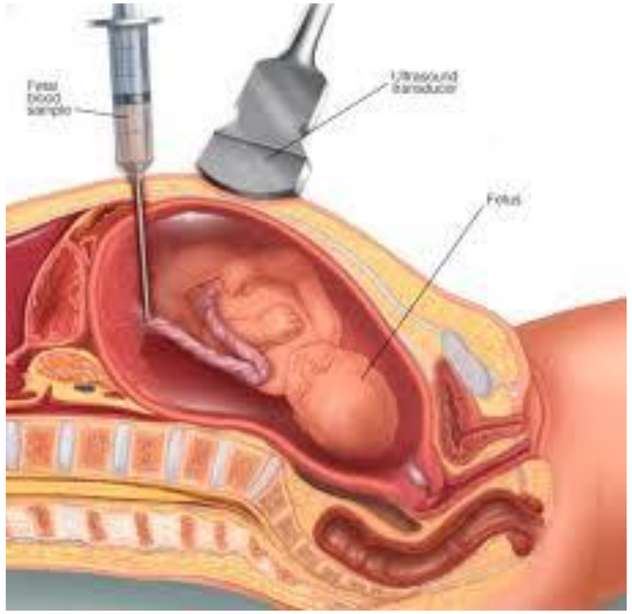
Percutaneous Umbilical Blood Sampling and Intrauterine Transfusion in the Setting of Fetal-Maternal Hemorrhage

Coleman Harber, MD; Andrew Greene, DO; Neva Lemoine, MD; James Damron, MD

Background



https://drnatashafetalmed.com/cordocentesis/

Percutaneous umbilical blood sampling (PUBS)

- Severe fetal anemia

Common indications:

- Red cell alloimmunization, non-immune hydrops fetalis, chromosomal diagnoses
- Fetal-maternal hemorrhage is an exceedingly rare indication

Complications:

- Bleeding (20-30%), fetal bradycardia (5-10%), pregnancy loss (1.3%), and vertical transmission of maternal infections

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Case

22 y/o otherwise healthy G1P0 presenting at 27w4d with vaginal bleeding and contractions after MVC two days prior

- Normal maternal Hgb/Hct
- Ultrasound: fetus vertex with normal placenta
- MCA dopplers elevated (1.84 MoM) and maternal-fetal Hgb elevated
- FHT initially Cat I, worsened to Cat II

Decision made to proceed with PUBS, possible intra-uterine transfusion

- CSE performed due to high risk of conversion to CS
- Opening fetal hematocrit 26.8
- 34 cc of O-, CMV -, leukocyte reduced irradiated whole blood transfused
- FHT improved back to cat I
- Hemodynamically stable post-procedure with reassuring NST prior to discharge

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References

Teaching Points

Fetal-Maternal Hemorrhage as indication for PUBS

Limited to case reports

Data Suggest Feasible Approach

CSE for Anesthesia

Good option if high risk of conversion to CD

Department of Anesthesiology
Perioperative, Critical Care
and Pain Medicine

SOAP
Society for Obstetric Anesthesia and Perinatology