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Fetal blood sampling from the intrahepatic vein for rapid karyotyping in the second and third trimesters.

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Abstract

One hundred and twelve fetuses with structural anomalies (n = 84), intrauterine growth retardation (n = 21) or amniotic fluid volume disorders (n = 7) detected by ultrasound underwent blood sampling from the intrahepatic vein for rapid karyotyping. The procedure was successful in 95.5%. 12.5% of the fetuses had an abnormal karyotype. Fetal bradycardia was observed in two fetuses (1.8%) and intraperitoneal bleeding in three (2.7%). There were three procedure-related losses but these were not due to the intrahepatic vein sampling itself. Fetal blood sampling is the method of choice for rapid karyotyping in the second and third trimesters, and the intrahepatic vein is an alternate site when access is difficult or failure to sample occurs at the placental cord insertion. Additional advantages of fetal blood sampling at the intrahepatic vein include absence of cord complications, reduced risk of fetal blood loss and fetomaternal haemorrhage, and the lack of need to confirm the fetal origin of the sample