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Title and subtitle Ultrasound as predictor of perinatal outcome		
<p>Abstract The aim of the work described in this thesis was to evaluate the value of ultrasound examinations of the amniotic fluid, umbilical cord and blood flow velocity waveform of the fetal and placental vessels as predictors of the perinatal outcome.</p> <p>In the first study, the amniotic fluid index (AFI) measured on admission to the labour ward was evaluated in low-risk pregnancies. An increased risk of operative delivery for fetal distress (ODFD) was found among women with oligohydramnios after rupture of the membranes. However, the perinatal outcome, expressed in terms of the blood pH in the umbilical vessels, Apgar score and rate of admission to the neonatal intensive care unit did not differ between the group of fetuses with oligohydramnios and the group with normal volume of amniotic fluid. It is therefore uncertain if measurement of the AFI makes any significant contribution to improving the perinatal outcome.</p> <p>In the second study, it was investigated whether prenatal detection of a nuchal cord in post-term pregnancies could be used to identify fetuses at increased risk of intrapartur fetal distress and ODFD. We were unable to demonstrate a correlation between presence of a nuchal cord and increased risk of adverse perinatal outcome in post-term pregnancies. It thus seems unlikely that prenatal identification of fetuses with nuchal cord could improve the outcome of post-term pregnancies.</p> <p>In the third study, Doppler ultrasound examination of the uterine and umbilical arteries were compared as predictors of adverse outcome in pregnancies complicated by suspected fetal growth restriction (FGR). Increased impedance in the uterine and umbilical arteries showed equally strong relations to adverse perinatal outcome. However, Doppler ultrasound examination of the uterine arteries seems to identify fetuses at increased risk, not detected by umbilical artery Doppler ultrasound alone. It was therefore concluded that Doppler ultrasound examination of the uterine arteries should be included in the surveillance of pregnancies complicated by FGR.</p> <p>In the last study, intrapartur Doppler ultrasound examination of the umbilical vein was performed. Pulsation in the blood flow velocity spectrum was seen in almost one-third of fetuses with signs of acute hypoxia. Fetuses exhibiting pulsation in the umbilical vein showed an increased risk of ODFD. However, clinically useful conclusions can not be drawn until the findings are confirmed by larger randomised studies.</p>		
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