

Abnormal umbilical cord coiling UCC. UCC association with placental dysfunction. Uterine arterial Doppler screening for placental dysfunction.

Abnormal umbilical cord coiling and comorbid associations with placental histopathology

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Abnormal cord coiling (hypo- and hyper-) may have chronic (growth restriction) and acute (fetal intolerance to labor, fetal demise) effects on the fetus and can be associated with velamentous cord insertion.

Hypo coiling is significantly associated with hypertensive disorders, abruption, preterm labor, oligohydramnios and fetal heart rate abnormalities. Hyper coiling is associated with diabetes mellitus, polyhydramnios, cesarean delivery, congenital anomalies and respiratory distress of the newborn. Hyper coiling has been associated with thrombosis of chorionic plate vessels.

Although no prenatal gestational age - specific standard exists for defining hypo-coiled cords, postnatal examination of the umbilical cord has clearly shown an association between hypo-coiled cords and adverse perinatal outcomes. Several studies have reported an increased frequency of adverse pregnancy outcome, including congenital anomalies, growth restriction, fetal heart rate abnormalities, preterm birth, and intrauterine death in patients with an uncoiled umbilical cord.

Pregnancies with either hypo- or hyper coiled umbilical cords are monitored closely, especially in the third trimester. The author performs serial ultrasound examinations, including Doppler studies and biophysical profile scoring, serial nonstress tests, and asks the mother to perform fetal movement counts.

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