pregnancies. We found in mature foetuses mean peak systolic velocity higher than 40 cm/sec. and PI lower than 3.00. In mature foetuses with preeclampsia we found higher mean peak systolic velocity in comparing with normotensive patients, but in mature foetuses with diabetes we found lower peak systolic velocity in comparing with normotensive patients.
Conclusions: The coefficient of variation values for placentas in-vivo and in-vitro, and fetal lungs and liver increase during pregnancy in normal and preeclamptic patients with increasing gestational age and decrease in diabetic patients. The mean peak systolic velocity in pulmonary arteries increase during pregnancy in normal and preeclamptic patients and decrease in diabetic patients.

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Magnetic resonance imaging (MRI) and ultrasound in fetal diagnosis

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Purpose: To see how the MRI can help ultrasound in the diagnosis of fetal anomalies.
Materials and methods: 98 women with 103 fetuses (5 sets of twins) between 23 and 37 weeks. Ultrasound was performed with a GE (General Electric) Logic 500 with 3.5 and 5.0 MHz transducers and Voluson 730 with 3.5 MHz and 3D transducers. The MRI was performed with 1.5T (Siemens and GE), using HASTE and SSFSE sequences.
Results: MRI better documented three complete agenesis of the corpus callosum, two cases of suspected hypoplastic kidney by ultrasound turned out to be normal by MRI, renal agenesis (4), diaphragmatic hernia (8), lynfangioma (1); tracheal atresia (1); bronchopulmonary sequestration (1); Chiari III malformation (1); xiphopagus twins (2) and cerebral tumor (1). MRI excluded other fetal anomalies associated with anencephaly (1); Chiari II (12); hydrocephaly (9); microcephaly (1); Dandy-Walker (4); hydranencephaly (1); intracranial hemorrhage (3); holoprosencephaly (1); encephalocele (3); cystic adenomatoid malformation (1); omphalocele (3); gastroschisis (1); limb-body wall complex (2); multicystic dysplasic kidney (4); hydrotorax (2); hydrops (3); urethral valves posterior (3); hydronephrosis (2); inferior limbs agenesis (1); thanatophoric dysplasia (2); cervical teratoma (2); sacrococcygeal teratoma (2); malformations related to fetal rubella and toxoplasmosis (3). Ultrasound better documented cardiac malformations such as rhabdomyoma (1); ventricular septal defect (2); hypoplastic left heart syndrome (1); and radium agenesis (TAR syndrome) (1).
Conclusion: MRI is a valuable complement to ultrasound when additional information is needed to confirm diagnosis during pregnancy.

P098
Magnetic resonance imaging in prenatal diagnosis

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Objective: To assess the role of Magnetic Resonance Imaging (MRI) in prenatal diagnosis.
Methods: From January 2000 to December 2002, fetal MRI was performed when an structural abnormality was suspected by ultrasound (US). Diagnosis between US and MRI were compared. Definitive diagnostic procedures were postnatal imaging, newborn physical examination and autopsy if termination of pregnancies (TOP) or neonatal death.
Results: 46 pregnant women were included. MRI was technically successful in all cases. Fetal anomalies suspected by US were: central nervous system (n = 18): 5 corpus callosum agenesia; 9 ventriculomegaly, 3 posterior fossa abnormalities, 1 neural tube defect; thoracic organs (n = 12): 3 cystic adenomatoid malformation, 2 lung sequestration, 7 congenital diaphragmatic hernia (CDH); nephrourologic system (n = 5): 1 bilateral renal dysplasia, 1 unilateral multicystic displasia, 1 ureteral duplication, 2 hiperechogenic kidneys; abdomen (n = 3): 1 omphalocele, 1 bowel obstruction, 1 ovarian cyst; 2 hemivertebras; 1 tumor of the mouth; 1 limb abnormality (oligodactylia); 1 neck cystic tumor; 1 cardiac rabdomyoma; 1 hydrops; 1 complete mole. In 44 out of 46 fetuses MRI confirmed US findings. In 13 suspected anomalies by US additional information after MRI was achieved, but counseling was not changed. We have to highlight 2 cases in which MRI showed new pathology: in a twin pregnancy with a fetus affected by CDH, MRI detected a CDH in the other fetus; isolated omphalocele was diagnosed in a fetus by US, but by MRI bilateral policystic kidneys were evidenced, so a Beckwith-Wiedeman syndrome was suspected, and confirmed after TOP by necropsy.
Conclusion: Although US continues the primary non-invasive technique for the detection of congenital defects in utero, in some circumstances in which US findings are inconclusive or limited, MRI can be an alternative diagnostic tool in the evaluation of fetal abnormalities.

P098a
In utero Magnetic Resonance Imaging in cases of ultrasound diagnosed isolated ventriculomegaly

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Introduction: Isolated Ventriculomegaly (VM) is the most common brain abnormality diagnosed on antenatal ultrasound but we have little information about the natural history and outcome in such cases.
Aim: To assess the use of in utero MR in cases of isolated ventriculomegaly as diagnosed by antenatal ultrasound.
Methods: Retrospective analysis of 30 cases of isolated VM diagnosed on ultrasound and referred for in utero MR. Categorised as mild or severe. Referring diagnosis, final diagnosis and gestational age were noted to allow assessment of the impact in utero MR had on the patient management.
Results: 18 of 30 cases were mild (< 15 mm), gestational age range 20–31 weeks, mean 22.8, median 22. 12 were severe (> 15 mm), gestational age range 21–37 weeks, mean 28, median 28.5.
The in utero MR diagnosis, which was confirmed at autopsy in cases of termination, or clinically post delivery (examination, ultrasound, MR) was as follows:
MR diagnosis (no. mild/ no. severe), isolated VM (10/5), agenesis corpus callosum (1/2) germinal matrix bleed (3/0), intraventricular bleed and cortical extension (0/1), arteriovenous malformation and bleed (0/1), vein of Galen aneurysm (1/0), aquaduct stenosis (1/1), focal hemimegalencephaly (1/0), hemimegalencephaly (0/1), genetic (1/1).
Conclusion: Severe VM usually presented at a later gestational age, often following a normal 20 week antenatal ultrasound scan and did not appear to be a progression of mild VM. Mild VM is usually detected at the 20 week scan and in those cases who had a further MR in the third trimester (5) did not appear to progress.
In utero MR provided essential diagnostic information not available from ultrasound in over half of our cases of isolated ventriculomegaly.
In utero MR should be performed in all cases of isolated ventriculomegaly diagnosed on ultrasound.