OC36.04
The value and merits of ultrasonography and magnetic resonance in the diagnosis and prognosis of diaphragmatic hernias

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Objective: a perceptive assessment of the aid provided by magnetic resonance image (MRI) of the fetus to ultrasonography (US) in diagnosing and prognosing dependably diaphragmatic hernias.
Methods: 13 pregnant women with gestation period ranging from 20 to 32 weeks underwent diagnostic test to performed by a GE scanner (General Electric) Logic 500 and Voluson 730 with transducers of 3.5 and 5.0 MHz and volumetric (3D and 4D). The MRI tests were performed by a 1.5 Tesla (Siemens and General Electric) with HASTE and SSFSE sequences.
Results: 11 fetuses showed left diaphragmatic hernia (LDH), and 2 fetuses showed right diaphragmatic hernia (RDH). The fetal liver was localized through ultrasound scan within the thorax of 4 fetuses (2 with LDH and 2 with RDH). MRI could, nevertheless, detect 7 fetuses with the same problem (5 with LDH and 2 with RDH), what was postnatally confirmed. Ultrasonography could better assess, if compared with magnetic resonance, the face of one of the fetuses with RDH that showed microphthalmia and intraventricular shunt. Another fetus showed, besides LDH, hypoplasia of vermis cerebelli, which was detected by both ultrasonography and magnetic resonance, having trisomy 18. 7 fetuses managed to survive the surgery (6 with LDH and 1 with RDH).
Conclusions: We believe that ultrasonography and MRI are complementary imaging methods in the assessment of diaphragmatic hernias. MRI can definitely add a great deal to US when assessing liver localization; it is therefore an important prognostic factor.

OC36.05
Importance of magnetic resonance imaging (MRI) in the diagnosis of congenital diaphragmatic hernia

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Seventeen (17) cases of congenital diaphragmatic hernias managed at the Fetal Medicine Unit of the Faculdade de Medicina do ABC are presented. All cases were evaluated with bi-dimensional ultrasound and magnetic resonance imaging (MRI). In all cases, the use of MRI improved the antenatal evaluation of the compressed lung and herniated organs, as well as the visualization of the volume and texture of the unaffected lung. Cases with an MRI calculated LHRratio greater than 1 had good neonatal prognosis. Compared to bi-dimensional ultrasound, MRI facilitates the correct identification of fetal organs, improving the diagnostic accuracy of congenital diaphragmatic hernias.

OC36.06
Just images: Case report of an intracranial teratoma presenting as disorganized cranial anatomy on routine 20-week ultrasound

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Mrs. A.D. was a 30 year old G-4, P-3 presenting for routine anatomical ultrasound at 20 weeks' gestational age. The fetus was appropriately sized with normal anatomical survey apart from bizarre intracranial structures. The patient was referred to our tertiary care facility for further assessment and recommendations. Initial diagnosis of the findings was severe anoxic-hypoxic insult with brain matter destruction, or significant infection with resultant disorganized brain. Alternatively was primary brain disorder such as severe hydrocephalus, atypical holoprosencephaly, or intracranial tumor.
Following discussion of options, the couple elected to proceed with the pregnancy and follow up with further investigations. Serology for viral infections (CMV, rubella, HSV and EBV), screen for alloimmune thrombocytopenia, and hypercoaguable screen were all negative. Karyotype showed 46,XX, and amniotic fluid PCR was negative for infection. MRI was performed to attempt to better characterize the lesion, and showed no recognizable brain tissue, cerebellum, or brain stem. No discrete tumor mass was seen and the impression was again a severe anoxic brain injury. Secondary diagnoses remained necrosis and degeneration due to severe intrauterine infection, or diffuse tumor. 2 weeks later the patient presented with dramatically increased symphysis fundus height, and brief scan confirmed massive polyhydramnios. Significant hydrocephalus was also apparent. Given the poor prognosis, early induction of labour organized for later that week. The patient presented 4 days later at 23.5 weeks with lack of fetal movement, and stillbirth was confirmed. Induction of labour was initiated with misoprostol leading to breech vaginal delivery. Significant dystocia was present, and cephalocentesis performed. Autopsy showed a large teratoma arising from the skull base and completely occluding blood flow to the normal brain, with resultant infarction and degeneration of surrounding cerebral tissue.

SUPPLEMENTARY MATERIAL ON THE INTERNET (IMAGE)

http://www.interscience.wiley.com/jpages/0960-7692/suppmat/index.html

OC36.07
Just images: Congenital epulis: prenatal diagnosis with ultrasound and MRI

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Congenital epulis is a rare benign oral cavity tumour which occurs at the alveolar ridge of the maxilla, it is 8 to 10 times more common in females than in males. Large tumours cause mechanical obstruction with prenatal polyhydramnios and postnatal respiratory problems.
We present a case of a 27 years old primigravida with unremarkable pregnancy until the 31 weeks scan; sonography revealed a female fetus with polyhydramnios and the presence of a 25×21 mm echogenic mass protruding of the mouth, the superior and inferior lips were normal and it was possible to see the vascular pedicle. The MRI suggested that there was no airway obstruction and the 3D scan did not add much more to the diagnosis. Subsequent sonograms demonstrated gradual enlargement of the mass (50×35 mm) and at 38 weeks, after an induction of labour, a 2790 g girl was delivered, no resuscitation was required and complete surgical removal was performed with an uneventful postoperative course. Histologic examination confirmed the diagnosis of congenital epulis.

SUPPLEMENTARY MATERIAL ON THE INTERNET (IMAGE)

http://www.interscience.wiley.com/jpages/0960-7692/suppmat/index.html