Indication for fetal MRI

Kyncl, Prosova, Frisova et al.
Department of Radiology
University Hospital Motol
Indication for fetal MRI

When to indicate fetal MRI:
- 24th week
- 18th week (20th week)
- 26th week
- late in the third trimester

Indications for utilizing MRI:
- failure of US examination
- confirmation/extension of the information from the previous examination
- "screening" at a known genetic anomaly
- evaluation of the development of the lungs
Indication for fetal MRI

- When indicate fetal MRI? (@ contra-indications)
  - 1.5T (3T)
  - first trimester of pregnancy (embryogenesis)
  - paramagnetic contrast agents

- What are the indications for MRI?
  - US method is first choice
  - US always precedes the MRI
Indication for fetal MRI

**The failure of US**
- obesity of the mother
- an-/oligo-hydramnion
- adverse position of fetus
- unclear US finding

**Confirmation/extension information from the US**
- pathology of the CNS by US (suspicion of pathology)
- organ malformations and tumors
- pathology on the genetic origin
- (suspected familial or genetic syndromes)
Indication for fetal MRI

The number of MRI examinations/year
FH Motol

- y2010: 62
- y2009: 52
Indication for fetal MRI
Indication for fetal MRI

CNS

- ventriculomegaly (agensis of CC, destruction of brain tissue, hemorrhage – FFE, T1)
- associated failure of the ventricular system shape (septal agenesis, septoopt. dysplasia, holoprosencephaly, D-W complex)
Indication for fetal MRI

CNS
- meningomyelocele
- SC teratoma @ combined anomaly
- the dominant US imaging

Confirmation/extension information from the USG
- spine and spinal cord
Indication for fetal MRI

Organ malformations, tumors

- GIT – malformation, atresia, stenosis
Indication for fetal MRI

Organ malformations and tumors

- facial defect
- craniofacial abnormalities
Indication for fetal MRI

Organ malformations and tumors

- neck tumors (teratoma, lymphangioma, neuroblastoma)
- topoanatomic information
Indication for fetal MRI

Organ malformations and tumors

- CCAM, sequestration, bronchogenic cysts (monitoring of the lung volume) atresia (lungs, bronchi)
Indication for fetal MRI

Organ malformations and tumors

- CCAM, sequestration, bronchogenic cysts (monitoring of the lung volume) atresia (lungs, bronchi)
Indication for fetal MRI

Organ malformations and tumors

- CCAM, sequestration, bronchogenic cysts (monitoring of the lung volume) atresia (lungs, bronchi)
Indication for fetal MRI

Organ malformations and tumors

- herniation

http://www.branicni-kyla.cz/
http://www.branicni-kyla.cz/
prenatalni.diagnostika@fnmotol.cz
Thank you for your attention.