METHODS
We performed brain MR in fetuses of 20–33 weeks of gestational age with ventriculomegaly diagnose on US. MR was performed within 2–7 days of US.
Fetal MR imaging was performed with Single-shot FSE T2 sequence in three planes on 1.5 T GE machine with a phase-array torso coil.

RESULTS
Single-shot FSE T2 imaging demonstrate normal anatomy and development of fetal CNS. In all cases MR confirm suspected US findings of ventriculomegaly but also provided additional information about cortical development. In two cases MR diagnose congenital abnormalities that had not been visualized in US as corpus callosum agenesis.

CONCLUSION
MR fetal imaging has become an important adjunct to ultrasound in the evaluation of fetal anomalies.
Single-shot FSE T2 imaging demonstrate normal development and abnormalities of fetal CNS. This technique complements US in characterization of suspected CNS fetal anomalies.
MR also allowed characterization of CNS abnormalities better than US.

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SCHILDER’S DISEASE : CASE REPORT
N. Bottosso, P. Reginster, P. Lamborelle, J. Khassis
CHC - Department of Radiology, Liege, Belgium

PURPOSE
To describe the MRI morphological and functional criteria in the neuroradiological diagnosis of a demyelinating lesion of the brain.

METHOD
We report a 12-years-old boy who was admitted to emergency ward for generalized tonic-clonic seizures.
MRI was performed at admission on a 3.0 T equipment (Achieva-Philips) with T1, T2, T2*, FLAIR, Diffusion weighted imaging (DWI), Dynamic susceptibility contrast weighted imaging (DSC WI), multivoxel spectroscopy and T1 after IV injection of Gadolinium.
Follow up by MRI two weeks and three months later.

RESULTS
Schiller’s disease is a rare sporadic demyelinating disorder with often mimics brain tumour or brain abscess. The disease usually affects children between 5 and 15 years-old, but may also begin in the third or fourth decades. Symptoms and clinical features are generally non specific and this disease is difficult to diagnose with certitude.

In our presented case, the diagnosis of Schiller’s disease was suspected based on clinical features, cranial MRI and neuropathological examination.
On MRI, one solitary left parietal lesion was revealed. Multivoxel spectroscopy was not useful, neither was DSC WI to differentiate demyelinating disease from neoplasia.
Based on morphological criteria, especially the incomplete rim of enhancement after Gadolinium and the presence of deep veins running radially through the lesion, the diagnosis of demyelinating disease was put forward.
Diagnosis was confirmed by neuropathological examination.
After two weeks of steroid therapy, cranial MRI revealed regression of the lesion. At four months of follow up, the patient had no neurological sequel.

CONCLUSION
Neuroradiological diagnosis of a demyelinating lesion of the brain can be strongly suspected based on MRI morphological criteria. Clinical and MRI features can be sufficient to avoid a biopsy and initiate an appropriate treatment.

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QUANTIFICATION OF DIFFUSION TENSOR IMAGING IN NORMAL WHITE MATTER MATURATION OF EARLY CHILDHOOD USING AUTOMATED PROCESSING PIPELINE

K.B. Loh¹ , L.K. Tan¹ , M. Bilgen¹ , H. Ariffin² , R. Muridan¹ , N. Ramli¹
¹University Malaya Research Imaging Centre, Kuala Lumpur, Malaysia, ²Department of Pediatric, University Malaya, Kuala Lumpur, Malaysia

PURPOSE
Degree of myelination in white matter (WM) affects the water diffusion properties in neuronal tissue and the status of myelination can sensitively be monitored using diffusion tensor imaging (DTI) modality. Previous measures of fractional anisotropy (FA) and mean diffusivity (MD) indices are based on subjective region of interest (ROI) and therefore are vulnerable to inter and intraobserver variation. Our study look at measurement of FA and MD using automated ROI with existing DTI atlas.

METHODS
Anatomical MRI and structural DTI were performed cross-sectionally on 26 developmentally normal children (age range, newborn to 48-month-old) using a 1.5 T MRI scanner and single-shot spin echo-echo planar sequence with diffusion sensitizing gradients applied along 32 directions while b=700 s/mm².