Background and Aims Neuroinfection is an entity with possible serious subsequent complications. Early and precise diagnosis can help in purposeful treatment and accurate prognosis. The aim of the study was the analysis of principles and value of neuroradiography in the diagnostic process in pediatric neuroinfection.

Methods The retrospective analysis comprised 74 patients diagnosed with encephalitis and/or meningitis. The cohort was divided into two groups: A (meningitis, n=45) and B (encephalitis and meningoencephalitis, n=29). Data obtained from medical records (medical history, signs and symptoms, results of laboratory tests and radiological imaging) were investigated. Computer tomography (CT) or magnetic resonance (MR) were performed in the study group.

Results In the group A first CT examination revealed abnormalities in 9.7% of patients, in the group B - in 28% of children. MR examination showed pathologial brain area in 79.3% of patients in group B. High signal in SE/T2 was observed in 95.7% and in FLAIR in 86.9%. In 90% of analyzed group B the disturbances in DWI were noted.

Conclusions CT examination preformed in the initial stadium of meningitis and/or encephalitis has limited diagnostic value for recognizing of inflammation. The characteristic of the abnormalities revealed by MR enables to recognize inflammation changes in central nervous system and their localization can direct diagnostic process. The presence of brain tissue alterations in MR image has significant correlation with clinical symptoms like seizures, consciousness disturbances and neurological deficits. The most sensitive sequences in estimation of the inflammation activity process are DWI and FLAIR.

[References]

PREGNANCY-ASSOCIATED PLASMA PROTEIN A LEVELS AND NEONATAL COMPLICATIONS IN POST-TERM PREGNANCIES

AR Zizzo, T Kirkaarda, T B Henriksen, N Uldbjerg. Department of Obstetrics and Gynecology, Aarhus University Hospital, Skejby, Aarhus, Denmark

Objectives To assess the association between serum pregnancy-associated plasma protein A (PAPP-A) measured in the first trimester and perinatal complications in post-term pregnancies.

Methods A total of 4948 singleton pregnant women, who delivered after 40th gestational weeks, were included at Aarhus University Hospital between January 2005 and December 2007. Serum levels of PAPP-A were determined at the first-trimester screening for Down syndrome (GA 8th – 13th). Labor was not induced routinely until 42nd weeks of gestation. However, in women with diabetes mellitus, gestational diabetes, preeclampsia, hypertension, prelabour rupture of membranes, twin pregnancies, fetal growth restriction and intrahepatic cholestasis, labor were induced by 40 completed weeks or earlier and were not included in the study.

Results In post-term pregnancies first-trimester serum PAPP-A below 0.4 MoM was associated with small weight for gestation (< 5th centile) (ORadj 1.7, 95% CI 0.9–3.0), Apgar score of less than 7 below 0.4 MoM was associated with small weight for gestation (< 5th centile) (ORadj 1.7, 95% CI 0.9–3.0), Apgar score of less than 7 at 5 minutes (ORadj 5.4, 95% CI 2.0–14.3), admission to the neonatal intensive care unit (ORadj 1.5, 95% CI 1.0–2.3), and newborn hypoglycemia (ORadj 3.4, 95% CI 1.8–6.4). In neonates with small weight for gestation the risk of hypoglycemia was increased considerably (OR 14.6, 95% CI 3.4–58.0).

Conclusions Low first trimester serum PAPP-A was associated with increased neonatal morbidity in post-term pregnancies, particularly in newborns with low birth weight. Thus, PAPP-A may qualify the timing of induction of labor in these pregnancies and low PAPP-A may indicate more closely follow-up when past 40 weeks of gestation.