ENCEPHALOPATHY/ ENCEPHALITIS -DIAGNOSTICS DILEMMA

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Encephalitis as an inflammation of the brain is diagnosed based on neurological symptoms, inflammatory changes observed in the cerebrospinal fluid. Acute encephalopathy means acute brain dysfunction caused by many various agents such as infection, metabolic disease, inborn errors of metabolism, hepatic or renal dysfunction, hypertension and others. The main brain abnormality is brain edema and diffusion-weighted images (DWI) are particularly useful for detecting early changes in the brain. Apart from Reye syndrome or acute necrotizing encephalopathy (ANE), recently two new infectious encephalitis/ encephalopathy syndromes were proposed: AESD (acute encephalopathy with biphasic seizures and late reduced diffusion) and MERS (clinically mild encephalitis/ encephalopathy with a reversible splenial lesion). The differential diagnosis for encephalitis/ encephalopathy syndromes include: Leigh's encephalopathy, glutaric acidaemia, methylmalonic aciduria, infantile bilateral strial necrosis, carbon monoxide poisoning, central pontine/extrapontine myelinosis, acute disseminated encephalomyelitis, acute haemorrhagic leukoencephalitis, arterial or venous infarct, severe hypoxia, traumatic injury. The authors present three children with encephalitis/ encephalopathy syndrome with clinical symptoms of brain inflammation and diagnosed with ANE, mitochondrial encephalomiopathy and Down syndrome with unexplained encephalopathy.