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Primary intraventricular brain abscess in a 10-year-old child

Patricia Barrio¹, Martina Messing-Jünger², Sandra Kunze², Andreas Röhrig², Sergei Persits²

¹ Department of Neurosurgery, University Hospital of León, Spain

² Department of Pediatric Neurosurgery, Asklepios Kinderklinik, Sankt Augustin, Germany

Introduction: Intraventricular abscesses are very rare and usually result from secondary rupture of a brain abscess. It is important to keep this differential diagnosis in mind.

Methods: We present a case report of a 10-year-old girl with a history of cardiac disease, who developed signs of possible meningitis. Primary CT demonstrated an intraventricular lesion. Clinical presentation, diagnostic findings, therapy and final outcome are discussed together with literature findings.

Case Report: After 2 days of headache, nausea and vomiting, the girl developed nuchal rigidity and fever. CRP was elevated. Initial CT/MRI on day 3 demonstrated a left ventricular horn lesion affecting adjacent brain structures. The contrasting mass had solid and cystic components. Neuroradiologists suspected a choroid plexus carcinoma. The girl's history with pulmonary atresia, patent foramen ovale, and ventricular septal defect led to lumbar puncture. CSF was suggestive for infection. A neuro-navigated abscess aspiration was performed and culture and sensitivity testing initiated, resulting in multisensitive *Eikenella corrodens*. Initially a broad antibiotic treatment and dexamethasone was started. After 3 weeks iv antibiotic was changed into oral Cefuroxime. Regular platelet inhibition was changed into low-molecular-weight heparin. Oral medication was continued for 8 weeks showing constant decrease of the contrasting lesion in follow up MRIs. CRP stayed negative. After the initial symptoms no further neurological or signs of infection were obvious. The girl underwent regular professional teeth cleaning.

Conclusions: A typical predisposing cardiac history together with central nervous symptoms and an intracranial contrasting mass should always lead to the differential diagnosis of a brain abscess, even in cases with atypical locations other than the white matter. *Eikenella corrodens* is a typical organism of the mouth flora. Harmless teeth cleaning procedures may cause hematogenous spread. Therefore antibiotic prophylaxis should be indicated. To our knowledge there are only six previous reports of primary intraventricular brain abscess.