

[797] Difficulties in the diagnosis of meningitis - a case of a child with head injury

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Background

Meningitis is a potentially life-threatening condition with the mean annual incidence rate in Poland estimated to 6-8 per 100 000 children. Clinical assessment of signs and symptoms of meningitis is challenging. Delayed diagnosis, and consequently delayed effective treatment, are associated with negative clinical outcome and severe complications. The clinical manifestation can vary depending on the age of the child. Symptoms of meningitis include headache, vomiting, altered mental status and neurological signs such as seizures. Intracranial pressure and meningeal irritation, typical for meningitis, can be associated with other diseases such as trauma, haemorrhage or malignancies.

Case Report

A 7-year-old male patient was admitted to Emergency Department due to loss of consciousness after a head injury - fall from his height. Symptoms occurred 1.5 hours after the injury. Upon admission patient was unconscious and had seizures. Head CT scan didn't show any signs of intracerebral bleeding and cerebral oedema. Patient was transferred to the Intensive Care Unit (ICU) due to his critical condition. During hospitalization in ICU patient began to be febrile and the inflammatory markers started to rise. Examination of the cerebrospinal fluid suggested viral infection. Treatment with antibiotics and antiviral agents was administered. After 5 days clinical improvement was observed, and patient was transferred to the pediatric ward in order to continue treatment and further investigation. On examination meningeal signs were observed. Additional imaging tests were performed, including head CT scan, MRI and EEG and revealed ambiguous findings. His symptoms resolved gradually and he was discharged after 19 days of hospitalization. The final diagnosis was meningitis, and patient was advised further neurological investigation.

Conclusions

This case highlights that the diagnosis of meningitis requires careful investigation and precise examination. Symptoms commonly associated with meningitis occur with different frequency. Therefore, this diagnosis should be considered in every patient who presents with one of the symptoms. In presented case, additional difficulty was the head injury which initially was considered as a reason of a patient's symptoms. Hence, the differential diagnosis process should always be carried out thoroughly and with particular care.