

INTRACRANIAL HYPOTENSION DUE TO CEREBROSPINAL FLUID OVERDRAINAGE

Neurorradiologia

Dados do Caso

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Dados do paciente : Feminino , 39 anos
Palavras-Chave : Cefaleia, Hipotensão Intracraniana, Derrame Subdural
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Resumo

Secondary intracranial hypotension due to cerebrospinal fluid overdrainage.

Histórico Clínico

A 39-year-old woman with thrombophilia developed a sigmoid sinus thrombosis that progressed to intracranial hypertension. A lumboperitoneal shunt was performed and, on the 6th postoperative day, the patient developed a headache with worsening in orthostasis and improvement after shunt valve closure.

Achados Radiológicos

Magnetic resonance imaging (MRI) depicted pachymeningeal enhancement, brain "sagging", pituitary enlargement, bilateral subdural hygroma, venous sinus engorgement and reduced ventricular size (Figure 2).

Discussão

Intracranial hypotension consists of an underdiagnosed pathology related to a cerebrospinal fluid (CSF) leak resulting in a compensatory intracranial increase in extracellular fluid and blood [1-3]. The typical symptom is headache with worsening in orthostasis, reduction in decubitus and without improvement with analgesia [1,2]. Imaging can be normal in up to 28% of cases [1,2], however the main findings consist of: cerebrospinal fluid (CSF) leak or extratecal CSF (characterized by collections in the subdural and spinal epidural spaces, spinal meningeal diverticula and CSF leak into soft tissues [1-5]), diffuse pachymeningeal enhancement [1,2,5,6], brain "sagging" (characterized by obliteration of the periquiasmatic and pre-pontine cisterns, inferiorization of the cerebellar tonsils, the optic chiasm and the mesencephalic aqueduct, flattening of the optic chiasma and overall reduction of the encephalic subarachnoid spaces [1,2,4-6]), enlarged pituitary gland (normal height up to 4.2 to 4.8 mm in women and 3.5 mm in men and considered increased when height > 1.5 times the expected [5]), neurohypophysis hematoma [5], sinus venous engorgement [5,6] and spinal epidural venous plexus engorgement [4] and reduced ventricular dimensions [4].

Lista de Diferenciais

- Primary intracranial hypotension: related to dural sac dehiscence due to trivial trauma or dural ruptures due to degenerative changes, and may be associated with Marfan and Ehlers-Danlos [1]
- Secondary intracranial hypotension: related to cranial or spinal surgery, lumbar puncture, spinal anesthesia, peritoneal shunt and craniospinal trauma [1]

Diagnóstico

- Secondary intracranial hypotension

Aprendizado

Regular pachymeningeal enhancement, brain "sagging", pituitary enlargement, dural venous sinus engorgement and reduced ventricular size characterizes intracranial hypotension.

Referências

1. Michali-Stolarska M, Bladowska J, Stolarski M, Ssiadek MJ. Diagnostic imaging and clinical features of intracranial hypotension—review of literature. Polish journal of radiology 2017; 82: 842.
2. Schievink WI, Dodick DW, Mokri B, Silberstein S, Bousser MG, Goadsby PJ. Diagnostic criteria for headache due to spontaneous intracranial hypotension: a perspective. Headache: The Journal of Head and Face Pain 2011; 51(9): 1442-1444.

- 3. Schievink WI, Maya MM, Louy C, Moser FG, Tourje J. Diagnostic criteria for spontaneous spinal CSF leaks and intracranial hypotension. American journal of neuroradiology 2008; 29 (5): 853-856.
- 4. Mokri B. Spontaneous intracranial hypotension. CONTINUUM: Lifelong Learning in Neurology 2015; 21 (4): 1086-1108.
- 5. Kranz PG, Tanpitukpongse TP, Choudhury KR, Amrhein, TJ, Gray L. Imaging signs in spontaneous intracranial hypotension: prevalence and relationship to CSF pressure. American Journal of Neuroradiology 2016; 37 (7): 1374-1378.
- 6. Kim SC, Ryoo I, Sun HY, Park SW. MRI Findings of Spontaneous Intracranial Hypotension: Usefulness of Straight Sinus Distention. American Journal of Roentgenology 2019; 212 (5): 1129-1135.

Imagens

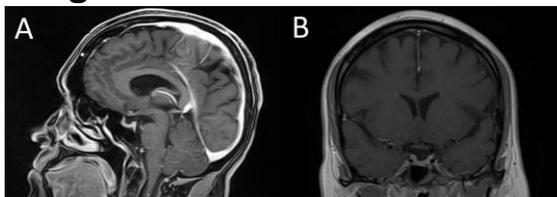


Figura 1. Sagittal post contrast T1-weighted sequence (A) and coronal T1-weighted sequence performed before the lumboperitoneal shunt.

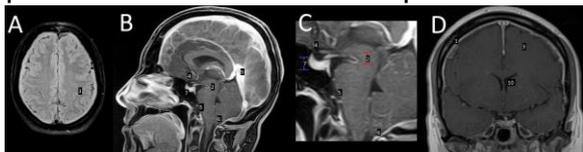


Figura 2. Axial FLAIR (A), sagittal (B and C) and coronal (D) post contrast T1-weighted sequence performed after 6 days of the lumboperitoneal shunt depicting [1] pachymeningeal enhancement, brain "sagging" ([2] reduction of the mamillopontine distance, [3] obliteration of the convexity sulci, [4] obliteration of the periquiasmatic and [5] pre-pontine cisterns, [6] inferiorization of the cerebellar tonsils, [7] pituitary enlargement), [8] bilateral subdural hygroma, [9] venous sinus engorgement and [10] reduced ventricular size.

Vídeos

Nenhum resultado encontrado