

Abstract

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Idiopathic intracranial hypotension associated with decreased blood concentration of vitamin A

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BACKGROUND: We report a case of idiopathic intracranial hypotension, a clinically rare syndrome. A 28-year-old woman was admitted with orthostatic headaches associated with nausea secondary to intracranial hypotension.

METHOD AND RESULTS: Lumbar puncture yielded an opening pressure of 4 cmH₂O in the lateral recumbent position, and the spinal fluid protein concentration was 56 mg/dl. There was no history of lumbar puncture or clear history of head trauma before the onset of symptoms. Spinal and cranial MRI showed no evidence of CSF leakage, and there was diffuse meningeal enhancement following gadolinium infusion. Cranial MRI showed no evidence of brain displacement due to low CSF pressure, such as tonsillar herniation. Radioisotope cisternography (RIC) showed rapid accumulation of isotope within the bladder and early disappearance of radioactivity from the head. About 2 months later the headaches resolved spontaneously, and repeated lumbar puncture yielded opening pressure elevation to 10.5 cmH₂O with a decrease in protein concentration to 28 mg/dl. The abnormal MRI and RIC findings had become normal. On the other hand, the patient had a low blood concentration of vitamin A, which is thought to play some role in the production of CSF.

CONCLUSION: The results of RIC suggested that the patient may have become symptomatic because of undetectable CSF leakage or hyperabsorption, but diminished production of CSF due to lower blood vitamin A concentrations may also have been a factor predisposing to this syndrome.

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