



Neuroradiologic Findings of Intracranial Hypotension: Two Cases *İntrakraniyal Hipotansiyonun Nöroradyolojik Bulguları: İki Olgu*

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Keywords: Intracranial hypotension, magnetic resonance imaging, myelography, treatment

Anahtar Kelimeler: İntrakraniyal hipotansiyon, manyetik rezonans görüntüleme, miyelografi, tedavi

Dear Editor,

A 26-year-old female was admitted to hospital with orthostatic headache, blurred and double vision, nausea, vomiting, and numbness of the hands. A neurologic examination revealed left abducens nerve palsy and left peripheral facial palsy. Cranial magnetic resonance imaging (MRI) showed diffuse dural thickening and contrast enhancement and bilateral -right predominant- subdural hematoma (Figure 1). Spinal MRI and MR myelography showed multiple dural clefts, cerebrospinal fluid (CSF) accumulation around the spinal roots, and a right paracentral perineural cyst at the level of L1-2 (Figure 2, 3). The patient did not respond to bed rest, hydration, and analgesic treatment, and was treated with blood patch.

A 33-year-old female was admitted to hospital with orthostatic headache, vertigo, and double vision. She had a baby with spontaneous vaginal delivery without regional anesthesia 1 month ago. Neurologic examination showed left abducens palsy. Cerebral and spinal MRI showed diffuse dural thickening and contrast enhancement. No abnormality was shown to cause CSF leakage (Figure 4). The patient responded to bed rest, hydration, and analgesic treatment.

Intracranial hypotension is an intracranial pressure disorder characterized by orthostatic headache that worsens with standing

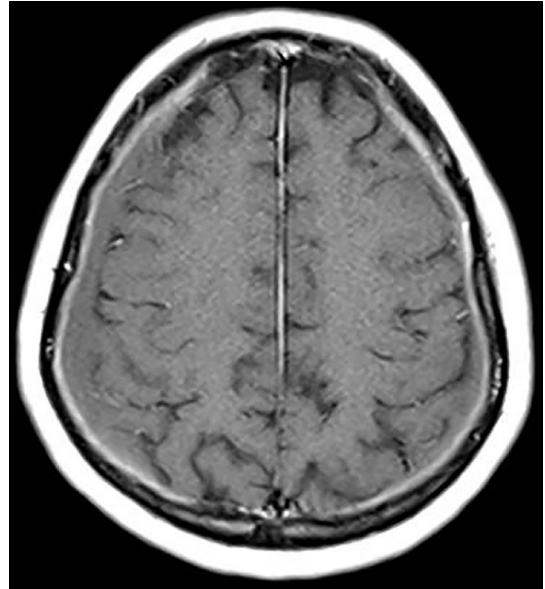


Figure 1. Cranial magnetic resonance imaging of case 1. Diffuse dural thickening and contrast enhancement and bilateral -right predominant- subacute stage subdural hematoma in axial T1 contrast-weighted imaging

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Received/Geliş Tarihi: 01.02.2017 **Accepted/Kabul Tarihi:** 26.05.2017

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Turkish Journal of Neurology published by Galenos Publishing House.

and improves with supine position. Cranial nerve dysfunction, visual disturbances, tinnitus, cervical pain, radiculopathy, cognitive disturbances, and changes in consciousness are also seen, though less often (1). This syndrome can result from CSF leakage from dural defects caused by central nervous system trauma, lumbar puncture or epidural anesthesia, or it can develop when there are underlying degenerative changes such as disc herniations or osteophyte formations and spinal meningeal diverticulum (1). Diffuse non-nodular cerebral meningeal contrast enhancement, congestion of venous sinuses, tightening of the posterior fossa, flattening of the corpus callosum, subdural hematoma, and hygroma are the most frequent radiologic features (1). Spinal MRI can show typical imaging findings, underlying anatomic abnormalities, and play a guiding role in the management of treatment (1). MR myelography is used routinely to show CSF leakage (2).

Intracranial hypotension should be kept in mind in the presence of orthostatic headache, cranial nerve palsies, and spontaneous or multiple subdural hematomas.



Figure 2. Magnetic resonance myelography of case 1. Multiple dural clefts and cerebrospinal fluid accumulation around the spinal roots especially at the lower cervical and upper dorsal levels

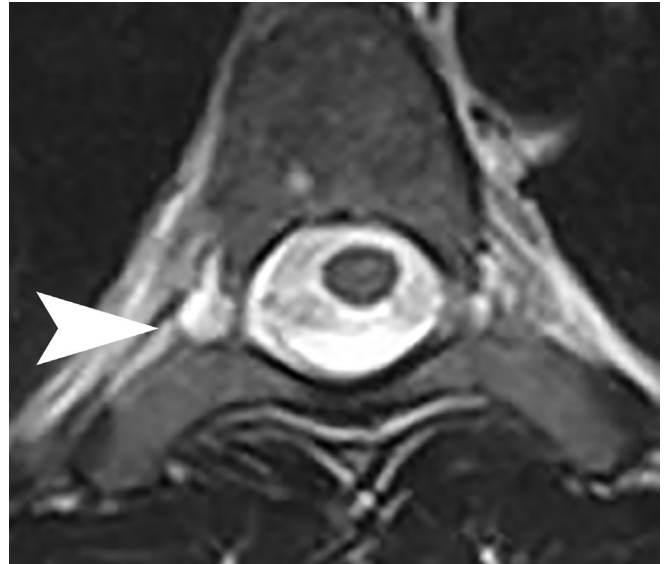


Figure 3. Magnetic resonance myelography of case 1. Right paracentral perineural cyst at the level of L1-2 in axial spinal T2-weighted images (arrow)

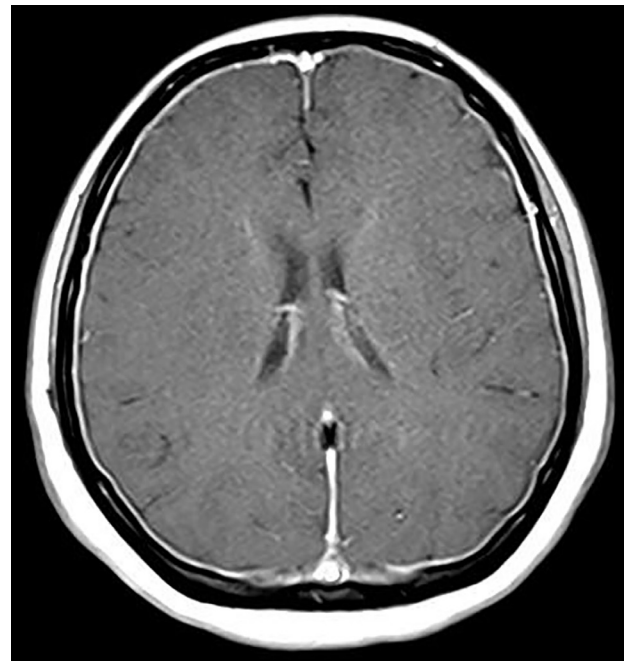


Figure 4. Cranial magnetic resonance imaging of case 2. Diffuse dural thickening and contrast enhancement in axial T1 contrast-weighted imaging

Ethics

Informed Consent: Not needed.

Peer-review: Internally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: Ö.K.Y., R.D., Ş.F.G., Concept: A.B., B.Ç., Design: H.B., Data Collection or Processing: B.Y., E.B.,

Analysis or Interpretation: S.T., Ö.K.Y., Literature Search: Ö.K.Y., Writing: Ö.K.Y.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

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