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Leptomeningeal Carcinomatosis in a Patient with Ovarian Cancer

Over Kanserli Bir Hastada Leptomeningeal Karsinomatozis Bulguları

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Anahtar Kelimeler: Over kanseri, leptomeningeal karsinomatozis, manyetik rezonans görüntüleme

Dear Editor,

A 61-year-old female who had been diagnosed as having ovarian cancer two years ago, had undergone hysterectomy, oophorectomy, and chemoradiotherapy, was admitted with headache, nausea, vomiting, change in consciousness, and epileptic seizure. A neurologic examination revealed lethargy, disorientation of place and time, papilledema, restriction of movement of the right eye outward gaze, and neck stiffness.

Brain magnetic resonance imaging (MRI) showed several metastatic lesions in both cerebral hemispheres (Figure 1), significant hyperintensity in the tentorium in fluid-attenuated inversion recovery-weighted images (Figure 2A, 2B), and contrast enhancement in the tentorium in post-contrast T1-weighted images (Figure 3A, 3B, 3C).

Radiotherapy and intrathecal chemotherapy treatments were planned for the patient who was diagnosed as having leptomeningeal carcinomatosis associated with ovarian cancer. However, the patient, whose overall condition deteriorated rapidly, died.

Ovarian cancer most frequently spreads to the abdominal and pelvic cavity and associated organs, however, it can metastasize to the lungs, liver and lymph nodes, and more rarely to other tissues (1). Central nervous system (CNS) metastases are rare, and involvement of the leptomeninx has been reported in a small number of cases to date (2,3).

Leptomeningeal carcinomatosis develops in 5-8% of patients with solid tumors and 5-15% of patients with hematologic malignancies (4). Among the solid tumors, breast and lung cancers

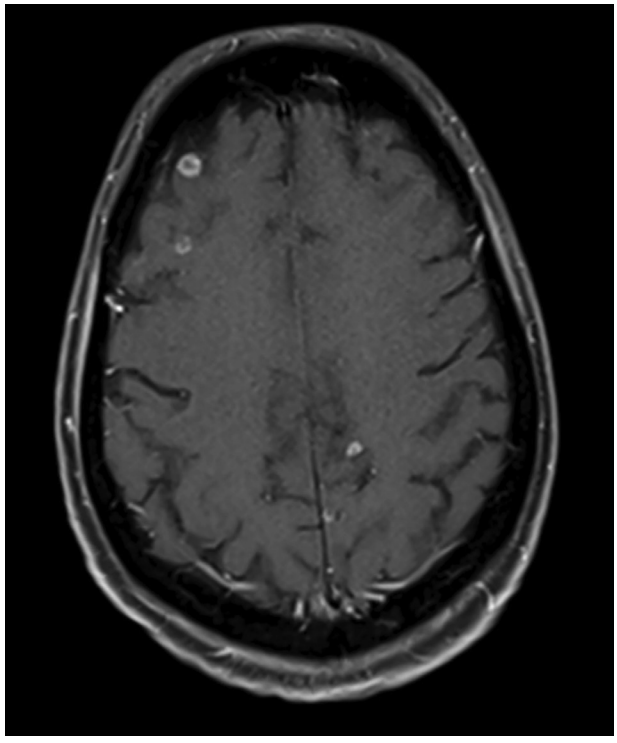

Figure 1. Post-contrast axial T1-weighted brain magnetic resonance imaging shows contrast-enhancing metastatic lesions in both cerebral hemispheres

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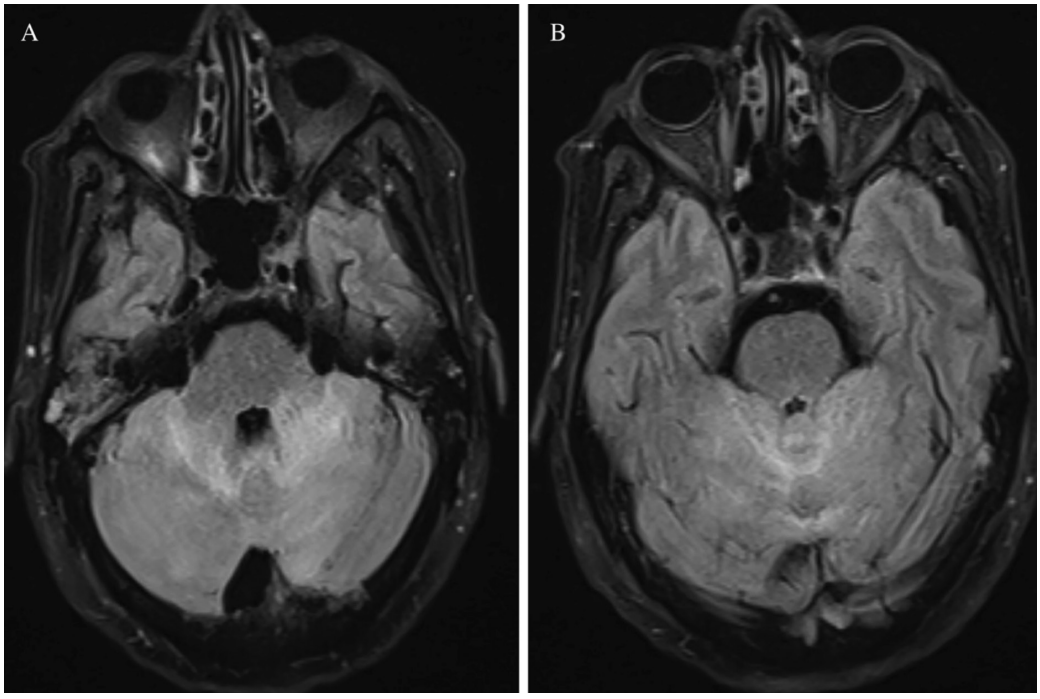

Figure 2. A, B) Axial FLAIR-weighted brain magnetic resonance imaging shows significant tentorial hyperintensity

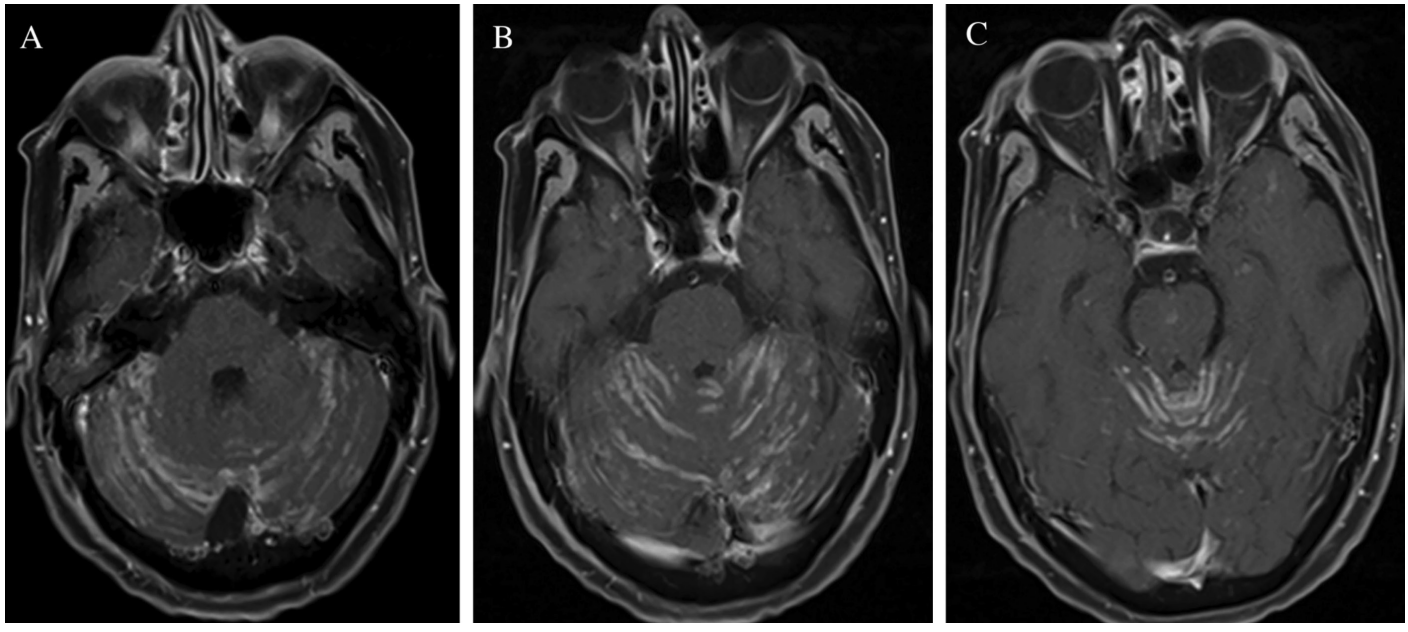

Figure 3. A, B, C) Post-contrast axial T1-weighted brain magnetic resonance imaging shows significant contrast enhancement in the tentorium

and malignant melanoma have the highest frequency of developing leptomeningeal spread (3). The most common signs and symptoms are headache, nausea, vomiting, cranial nerve palsies, cognitive loss, ataxia, epileptic seizure, and nape stiffness (5).

The gold standard for diagnosis is the detection of malignant cells in cerebrospinal fluid (CSF) cytology, but single CSF analysis may not be enough for diagnosis and repeat CSF analyses may help detecting malignant cells in CSF. Brain MRI findings are also valuable in diagnosis. Leptomeningeal contrast enhancement is detected on cerebral convexities, basal cisternas, tentorium, ventricular epandimal surfaces, usually in irregular and nodular nature (5). The diagnostic senstivity of contrast-enhancing MRI is approximately 70% and the specificity is 77-100% (5). MRI findings are sufficient for diagnosis in patients with typical clinical features (5).

Ethics

Informed Consent: Retrospective study.

Peer-review: Internally peer-reviewed.

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