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Intracranial Hematoma in Herpes Simplex Encephalitis: A Rare Complication

Herpes Simpleks Ensefalitinde İntrakranyal Hematom: Nadir Bir Komplikasyon

Özlem Ethemoğlu[1], Mehmet Fırat[2], Kadri Burak Ethemoğlu[3], Mehtap Kocatürk[1]

[1]Harran University Faculty of Medicine, Department of Neurology, Şanlıurfa, Turkey
[2]Osm Middle East Private Hospital, Clinic of Infectious Diseases, Şanlıurfa, Turkey
[3]Harran University Faculty of Medicine, Department of Neurosurgery, Şanlıurfa, Turkey

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Anahtar Kelimeler: Komplikasyon, intrakranyal hematom, ensefalit, herpes simpleks

Introduction

A previously healthy man aged 27 years was admitted to our hospital with a 2-day history of headache, confusion, and fever. The initial neurologic examination revealed impaired consciousness without seizures or focal neurologic deficits. Cerebrospinal fluid (CSF) analysis showed white blood cells 270/mm^3 (87% lymphocytes, 13% neutrophils), protein level 132.6 mg/dL, and glucose 53 mg/dL (the synchronous serum value was 102 mg/dL). Other blood cell counts and the results of routine biochemical analysis were normal. CSF and blood cultures were negative. Electroencephalography showed right temporal focal slowing. CSF samples were positive for herpes simplex virus (HSV) 1 DNA in polymerase chain reaction, which confirmed the diagnosis of HSV-1 meningoencephalitis and antivirus treatment was started. The patient received intravenous acyclovir (30 mg/kg/day for 21 days) and dexamethasone (16 mg/day for 16 days). Brain computerized tomography (CT) performed on admission was normal (Figure 1). Brain magnetic resonance imaging performed on admission showed increased signal intensity in right temporal, inferior frontal, insular, and left medial temporal areas (Figure 2). Brain CT scan on day 2 showed a hematoma in the right medial temporal lobe with mass effect (Figure 3). The patient had no secondary clinical deterioration. Magnetic resonance angiography showed no aneurysm or vascular malformation. He remained asymptomatic on subsequent clinical follow-up.

Herpes simplex encephalitis (HSE) complicated by intracerebral hematoma is very unusual. It has been suggested that the rupture of small vessels affected by vasculitis causes secondary bleeding (1). Intracerebral hematoma may occur on admission or during hospitalization and even early treatment with acyclovir (2).

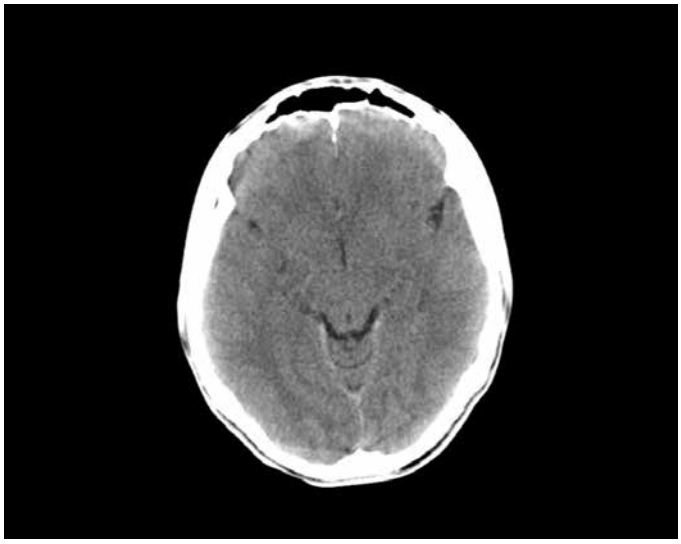

Figure 1. Brain computerized tomography on admission was normal

Address for Correspondence/Yazışma Adresi: Özlem Ethemoğlu MD, Harran University Faculty of Medicine, Department of Neurology, Şanlıurfa, Turkey
Phone: +90 414 318 30 30 E-mail: ozlem_uzunkaya@hotmail.com
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Figure 2. Brain magnetic resonance imaging axial T2-weighted image on admission showed increased signal intensity in the rhigt temporal lobe and left medial temporal lobe

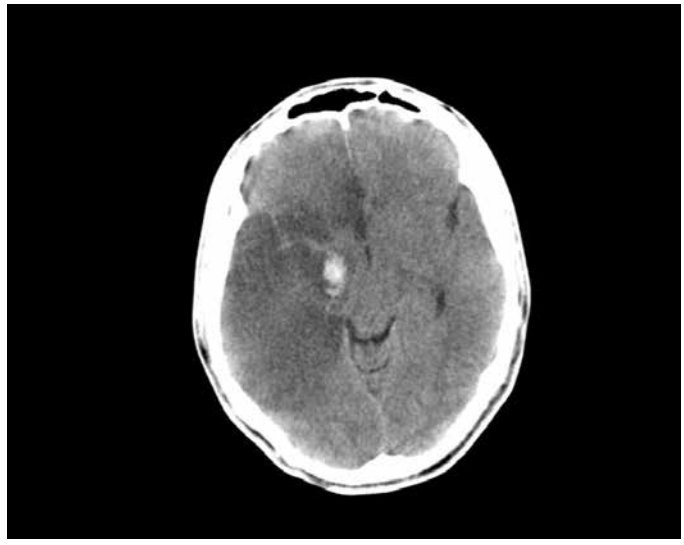

Figure 3. Brain computerized tomography on day 2, demonstrating a hematoma in the right medial temporal lobe with mass effect

Intracerebral hematoma, which complicates HSE, is not always associated with poor outcomes. Secondary neurologic deterioration may be related to size, location, and mass effect of hematoma (3). HSE should be kept in mind in the etiology for patients who have symptoms typically suggestive of acute encephalitis and intracerebral hematoma.

Ethics

Peer-review: Internal peer-reviewed.

Authorship Contributions

Concept: Özlem Ethemoğlu, Mehmet Fırat, Kadri Burak Ethemoğlu, Mehtap Kocatürk, Design: Özlem Ethemoğlu, Mehmet Fırat, Kadri Burak Ethemoğlu, Mehtap Kocatürk, Data Collection or Processing: Özlem Ethemoğlu, Kadri Burak Ethemoğlu, Analysis or Interpretation: Özlem Ethemoğlu, Literature Search: Ozlem Ethemoğlu, Writing: Özlem Ethemoğlu.

Conflict of Interest: This statement is to certify that all authors have seen and approved the manuscript being submitted. This case report has not been submitted for publication nor has it been published in whole or in part elsewhere. There is no conflict of interest in this paper. There were no external funding sources for this study.

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