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Posterior Fossanın Spontan Subdural Hematomu

Spontaneous Subdural Hematoma of The Posterior Fossa

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Özet

Travma öyküsü olmayan erişkinlerde posterior fossanın akut veya subakut subdural hematomları çok nadirdir ve tüm intrakranial hematomların yaklaşık % 0.6-1'ini oluşturur. En sık ilişkili faktör koagülasyon anormalliğidir. Bilgisayarlı tomografi subdural hematomun detaylarını gösteren en iyi görüntüleme seçeneğidir. Bu çalışma, posterior fossada subdural hematom için acil hekimlerini bilinçlendirmeyi ve yanlış tanıyı önlemeyi amaçlamaktadır.

Anahtar Kelimeler: Subdural hematom; posterior fossa; travmatik olmayan

Abstract

Acute or subacute subdural haematomas of the posterior fossa in adults without a history of trauma are very rare and constitute about 0.6 to 1% of all such intracranial hematomas. The most associated factor is coagulation abnormality. Computed tomography seems the best imaging choice to outline the details of subdural hematoma. This study aims to raise awareness for emergency physicians for the subdural hematoma in the posterior fossa and to avoid misdiagnosis.

Keywords: Subdural hematoma; posterior fossa; non-traumatic.

INTRODUCTION

Subdural hematoma (SDH) in posterior fossa is an unusual location for adults without a history of trauma (1). The incidence is about 0.6 to 1% cases of all such SDH. There are numerous non-traumatic pathologies that may result SDH. (2). We describe a case of spontaneous subacute SDH in the posterior fossa associated with anticoagulation therapy and good outcome after conservative therapy.

CASE REPORT

A 74-year-old female was admitted to emergency department for one week of progressive, pronounced dizziness and headaches. The patient was on warfarin therapy for a long time because of heart disease. On admission, she was in a good general condition. She could not remember any previous head injury. She was awake, alert and complained of severe dizziness when moving the head or rising. She complained of severe vertigo and was unable to walk unaided. The neurological examination revealed cerebellar sign and gait ataxia. There were no nystagmus, ocular palsies, facial weakness or dysphagia. Her fundus examination was unremarkable. Both planter reflexes were flexors. She was neither hypertensive nor diabetic.

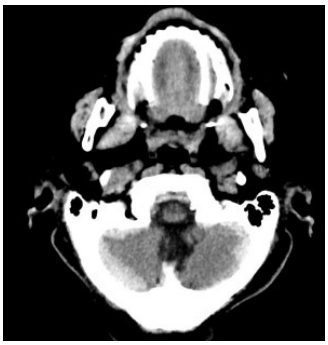

Figure 1: *Non-contrast axial CT scans showing bilateral subdural haematomas, more pronounced on the right*

On admission, her temperature was 37.2°C, her heart rate was 82 beats/min, her respiratory rate was 16 breaths/min and her blood pressure was 110/70 mmHg. Blood tests showed that coagulation was within the normal range.

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Computed tomography (CT) of brain revealed bilateral subacute SDHs in the posterior fossa with mass effect **(Figure 1).** T1 and T2-weighted magnetic resonance images (MRI) hyper-intense indicating subacute SDHs **(Figure 2-3).**

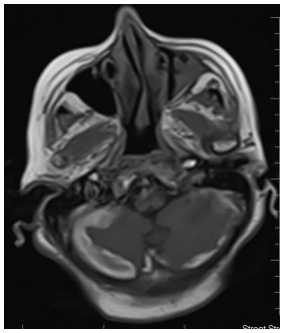

Figure 2: *T1-weighted MRI demonstrate depicts the subdural haematomas which are much more pronounced on the right side*

She was hospitalized in the neurosurgical department and started on anticoagulation with enoxaparin bridged with warfarin. The patient was followed conservatively. The patient made a favorable improvement in terms of headache, vomiting, and consciousness within one week and the patient was discharged after 7 days.

DISCUSSION

The reported incidences of spontaneous SDH relative to total SDH have ranged from 2 to 6.7% inhabitants per year and they predominantly occur in elderly individuals (3,4). However, SDHs are rarely seen in the posterior fossa. In a study only 0.5 % of intracranial SDHs were located in the posterior fossa (5).

A spontaneous SDH refers to a hemorrhage occurring in the absence of provoking factors, such as diffuse cerebral atrophy, head trauma. According to Komatsu et al and Ishii et al such spontaneous hemorrhages tend to have an arterial origin (4,6). In otherwise healthy patients without head trauma, a spontaneous rupture of a small bridging vein (especially in elderly people with marked brain atrophy), Berry aneurysm, or an arteriovenous malformation may be the culprit (7,8). As in our case, the absence of any trauma the spontaneous nature of the bleeding is probably related to the rupture of the bridge veins secondary to anticoagulation with warfarin. The relationship between intracranial hemorrhage and anticoagulation therapy is well known and approximately 30% of all intracranial hemorrhages associated with anticoagulants are SDH (9).

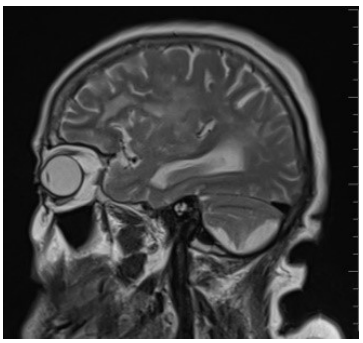

Figure 3: *T2-weighted MRI in sagittal view showing the hyperintense subdural haematoma and its mass effect*

Posterior fossa SDHs therefore act as a fast-growing space-occupying lesion. Numerous symptoms can be in the form of increased intracranial pressure, headache, vomiting, anisocoria, dysphagia, cranial nerve palsies, ataxia, and even neck rigidity (2). In our study, the patient presented with similar symptoms to the literature.

Non-contrast CT scan is the best way to diagnose SDHs because of its, speed, relative simplicity, and widespread availability. However, it is still difficult to detect a SDH in the unusual locations due to the presence of bone artifacts (10). MRI clearly demonstrated superiority in the detection of SDH especially for hematomas that are small in size or those located unusual locations (11). Classically, MRI can evaluate the age of the bleeding through the signal on both T_1 and T_2 sequences: isoT_1/hypoT_2 in the acute stage, hyperT_1/hypoT_2, then hyperT_2 in the subacute stage, as in our case and hyperT_1/hyperT_2 for the late stage.

Treatment of SDHs is still controversial, varying from conservative therapy to aggressive surgery, such as drainage and/or suboccipital craniectomy. The authors suggest that neurologically stable patients with acute SDH with small hematomas can be managed non-surgically. Patients with coma in clinically and neurologically stable presentation; no sign of brain herniation; and have a clot thickness of

less than 10 mm and a midline shift of less than 5 mm on initial cranial CT scan can be treated conservatively (1,11,12).

As a result, although SDH in posterior fossa is an unusual location , it should be kept in mind that patients with cerebellar and vestibular symptoms.

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