

Unilateral Oculomotor Nerve Palsy from Chronic Subdural Hematoma: Case report and Review of the Literature

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Abstract

Chronic subdural hematoma with isolated 3rd cranial nerve palsy was detected in a patient who received an antiplatelet agent. He was operated and after surgery had an immediate resolution of palsy. The proposed mechanism of the reversible 3rd nerve palsy was a compression to the left uncus and moreover a microvascular infarction of the nerve due to mechanical reason, that is rarely observed in this type of intracranial hematomas.

Keywords: Chronic subdural hematoma; 3rd cranial nerve palsy; Antiplatelet agent; Reversible 3rd nerve palsy

Introduction

Chronic subdural hematoma is a common result after a mild to moderate head injury, especially in elderly who received anticoagulant agents [1,2]. There is a broad spectrum of signs and symptoms, from a mild headache, hemiparesis to comatose patient. Cranial nerve palsies from a chSDH as initial symptoms are uncommon. Pupil-sparing oculomotor nerve palsy with chSDH was described first time from Crone KR et al in a patient with adult-onset diabetes mellitus [3]. Isolated 3rd cranial nerve palsy from bilateral chSDH was first published from Phookan et al, who described an immediate resolution of palsy after surgery (4). In our study we report a bilateral chSDH which caused a unilateral oculomotor palsy in a patient who received an antiplatelet agent.

Case Report

An 83-year old man with a recent history of anti platelet agent administration suffered from a mild headache after a minor head injury two months before. The last two days his daughter observed a left ptosis and a progressive left hemiparesis. He came to our hospital, where the neurologic examination included GCS: 15, 4/5 left hemiparesis and a left ptosis with a slight anisocoria. The CT scan showed a bilateral chronic subdural hematoma (chSDH) (Figure 1). He underwent an

urgent evacuation of hematomas through 4 burr holes, frontal and parietal under general anesthesia. Hematomas had a very high pressure. We inserted bilaterally from parietal burr holes two drainages, which were removed after 48 hours. The ptosis and the hemiparesis resolved immediately, 12 hours after surgery. The proposed mechanism of the reversible 3rd nerve palsy was a compression to the left uncus and moreover to the left oculomotor nerve in the ambient cistern. The patient left our department after 2 days and he returned to his normal life and activities without any neurological deficit.

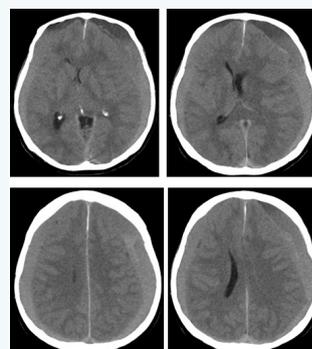


Figure 1: The CT scan showed a bilateral chronic subdural hematoma (chSDH).

Discussion

chSDH in elderly is the most common hematoma after a head injury, especially in case who received any form of anticoagulants. Bilateral chSDH create a new intracranial environment, where there exists a different balance, which is more fragile. The time of disturbance causes various symptoms and signs. A unique feature is unilateral 3rd cranial nerve palsy. According to this clinical entity a few cases of oculomotor palsy as an initial symptom of a chSDH was published the last 30 years [3-5]. The herniation of uncus in cases of intracranial hypertension compress directly the oculomotor nerve and mesencephalic structures, resumed to anisocoria and coma. The differential diagnosis of a conscious patient with anisocoria includes diabetes mellitus, hypertension, atherosclerosis, collagen vascular disease, intracranial aneurysm, particularly of the posterior communicating artery, cavernous sinus thrombosis [4-8]. The mechanism in all cases is microvascular infarction of the nerve due to a mechanical or pathological reason.

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