Case report

Status epilepticus in a 52-year-old woman due to intracranial needle

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ABSTRACT
Intracranial needles are a rare entity. They most commonly present with headache and seizures. The management of such patients is sometimes challenging. We present a 52-year-old woman who was admitted to our hospital with status epilepticus, because of an intracranial needle. There was no history of epileptic seizures and she was asymptomatic until the time of presentation. © 2012 British Epilepsy Association. Published by Elsevier Ltd. All rights reserved.

1. Introduction

Intracranial foreign bodies are generally due to penetrating injuries through the orbits, ear or cranial bones. Sometimes surgical objects may be forgotten in the brain during surgery. Patients with intracranial needles have rarely been reported previously.1 Needles are mostly inserted via the fontanelles, cranial sutures, and more rarely through the orbits in infancy for the purpose of killing unwanted babies.2 Most of the cases reported in the literature were diagnosed incidentally and/or during evaluation for minimal symptoms such as headache or epilepsy.3 Nearly forty cases have been reported in the scientific literature; most of them were identified in Turkey and Iran, with only a few cases in the Far East, North and Eastern Europe, and the United States. One case was reported in Italy in 1987.4 Intracranial needles can present later in life with features of headache, seizures or altered behavior.5 We report a fifty-two-year-old woman with status epilepticus (SE) resulting from the presence of sewing needle situated in the brain.

2. Case report

A 52-year-old woman was admitted to the emergency department of a local hospital with generalized tonic-clonic (GTC) seizures. Five consecutive seizures occurred at night from sleep. She did not regain consciousness in between seizures. A diagnosis of generalized convulsive SE was made. Although intravenous diazepam was administered, GTC seizures continued. After phenytoin loading, seizures did not recur and she regained consciousness. The next day two further GTC seizures lasting nearly two minutes each were observed. Then the patient was taken to our neurology clinic for evaluation.

On admission she was alert and her neurological examination was normal, there were no localizing neurological examination findings and or lateralized weakness. There was not previous history of epileptic seizures, and her family history was unremarkable. She reported no history of head trauma or injury. Biochemical tests such as plasma glucose levels, folate, vitamin B12, hematological, infectious, electrolytes, urinalysis and hormones test values were normal. Computerized tomography (CT) of the brain was performed and showed a sewing needle embedded in the left frontal lobe, passing through the anterior horn of the left lateral ventricle (Fig. 1). Intracranial bleeding, arteriovenous malformation and any intracranial occupying lesion were not detected by the CT scan. Also, skull radiography demonstrated the presence of a sewing needle, situated in a craniocaudal direction along the midline (Fig. 2a and b). We could not identify any other precipitating factor for SE.

The patient did not know how the needle was introduced there and her family claimed not to know. Based on the needle’s location, we thought that it might have been inserted through the anterior fontanel during infancy. An interictal scalp electroencephalography (EEG) recording was performed two days after the seizures had stopped and yielded no abnormal findings. Then video-EEG monitoring was undertaken. This was also normal. The seizures did not recur once phenytoin maintenance therapy (300 mg/day) had been established. Surgical intervention was considered unnecessary and our approach was conservative. We thought...
3. Discussion

Sewing needles are among the more unusual foreign bodies that may be found in the brain. They may end up in the brain as a result of homicidal attempts, non-accidental or accidental injuries. Although the incidents often occur in infancy or early childhood (before the closure of fontanelles) they may not present until much later in life with features of headache, seizures or altered behavior. The reported cases in the literature are from different countries including Germany, the United States, Turkey, Poland, Hungary, Yugoslavia, and Iran (3). There are many reports of sewing needles and other foreign objects retained in the brain for long periods of time without any symptoms. According to Amirjamshidi et al. more than three fourths of the cases present in the first and second decade of life. Two of them were beyond the age of 50, one of these late presentation was incidental and occurred in the context of investigations for head trauma, the other was during a postmortem examination for an unrelated cause of death. Likewise, our patient was asymptomatic until fifty-two year-old. Interestingly she presented with status epilepticus. Headache and epilepsy are the main symptoms and they often appear when the patient reaches adulthood. Tuncer et al. has reported a man who first experienced a GTC seizure aged 32. Ameli et al. reported a 32-year-old man who had developed epilepsy eight years earlier. Sewing needles were visible in both cases on skull radiography. Late-onset epilepsy due to an intracranial needle was reported previously. However, to date, no case presenting with status epilepticus has been described.

Other rare clinical features of intracranial needles are hemiparesis and gait disturbance, brain abscess, hemi-chroea and cranial nerve palsy. It is a common feature in these cases is that patients and their relatives claim to have no idea about how the needles was inserted. Similarly, in our case, the patient and her relatives claimed not to know how the needle got into her head. Presumably the needle was introduced in infancy before the closure of the fontanelles. Whether the retained needles should be removed surgically or not is controversial. Tuncer et al. suggest that surgical removal is not indicated in asymptomatic patients with or without antiepileptic therapy. Similarly, Ilbay et al. recommend conservative approach, if the patient is symptom-free, the diagnosis is purely incidental and there is no risk of infection. Also, Abbassioun et al. point out that metallic foreign bodies are much better tolerated in the brain than fragments of bone. According to the majority of authors, the therapy of choice should consist of follow-up alone when no clinical signs or symptoms are present. Antiepileptic drugs should be reserved only for patients with seizures. Amirjamshidi et al. described that there was no absolute indication for removing intracranial sewing needles detected in the later decades of life. In keeping with this, we have decided to follow-up the patient and continue antiepileptic treatment. So far, the seizures have responded to phenytoin therapy.

In conclusion, our case suggests that patients with intracranial needles may present late in life with epilepsy or status epilepticus. We suggest that surgical intervention is unnecessary, if seizures are under control with antiepileptic drug therapy.
References