Asymptomatic Calcified Chronic Subdural Hematoma in the Elderly

Masaru MATSUMURA and Ken NOJIRI

Department of Neurosurgery, Hokushin General Hospital, Nakano, Nagano

Abstract

A 77-year-old man with an asymptomatic calcified chronic subdural hematoma is reported. Thirty-seven years elapsed between the time of the head trauma and diagnosis. The advanced age of the patient when the calcified chronic subdural hematoma was diagnosed and the long interval between the trauma and diagnosis were both unusual features of this case. As far as we know, this patient is the oldest reported in the literature. Removal of calcified chronic subdural hematoma in the elderly is neither necessary nor beneficial.

Key words: calcification, chronic subdural hematoma

Introduction

Calcified chronic subdural hematoma is rare, and the majority of the patients reported have been children or young adults.\(^{2,6,12,16-18,25}\) Patients reported over the age of seventy are extremely rare,\(^{7,24}\) and as far as we know, the oldest reported case is 71.\(^{24}\) The purpose of this paper is to present a 77-year-old patient with an asymptomatic calcified chronic subdural hematoma.

Case Report

On September 24, 1983, a 77-year-old man was referred to us by a local hospital due to a roentgenographic abnormality of the skull following a minor craniocerebral trauma resulting from a traffic accident on September 21. He was alert and neurological examination was normal.

Skull roentgenography demonstrated a huge calcified mass at the left fronto-temporo-parietal region (Fig. 1). Computerized tomography (CT) demonstrated high-density calcified plaques over the left cerebral cortex (Fig. 2).

In 1946, at the age of 40, after drinking some alcohol, the patient had fallen and struck his head although consciousness was not lost. Afterwards he suffered from headaches for several months but these disappeared spontaneously. He had no history of convulsive seizure or meningitis.

He refused further evaluation.

Discussion

More than a hundred cases of calcified chronic subdural hematoma have been reported.\(^{7,11,18}\) The majority of these patients have been children and young adults,\(^{2,6,12,16-18,25}\) and elderly patients have been extremely rare.\(^{7,24}\)

In 1844, von Rokitansky\(^{23}\) first described a calcified chronic subdural hematoma found at autopsy. However, it was not until 1930 that Goldhahn\(^{10}\) reported the first successful removal of a calcified chronic subdural hematoma in an 11-year-old child.

The incidence of calcified chronic subdural hematomas was reported to be 1 out of 50 to 310 cases of chronic subdural hematoma; Allen \textit{et al.}\(^{21}\) found 2 in 245 cases, Mori \textit{et al.}\(^{18}\) found 1 in 120 cases, Munro\(^{19}\) found 1 in 310 cases, and Nakamura \textit{et al.}\(^{20}\) found 3 in 150 cases.
No satisfactory explanation as to the origin of calcified chronic subdural hematomas has yet been found. An inherent metabolic capacity for calcification was suggested by Boyd et al., but a local factor has also been postulated by McLaurin et al., who described a case of a bilateral chronic subdural hematoma in which calcification occurred on only one side. Afra emphasized that necrosis of the connective tissue caused vascular thrombosis, facilitating the deposition of calcium.

The interval between the initial bleeding and development of calcification has been reported to vary from 3 months to 3 years but the actual interval is unknown. A calcified chronic subdural hematoma in a 4-month-old infant was reported by Ingraham and Matson.

Roentgenography of the skull is very important in diagnosing calcifications. The extent of calcification may vary from a lentiform focus to a huge deposit that envelopes most of the hemisphere. A fairly constant roentgenographic feature of the calcium deposit is its well-corticated margin. If the calcification is not dense, patchy deposits may be scattered within its confines. Calcification can occur in both the parietal and visceral capsules as well as in the hematoma itself. Changes in the thickness and asymmetry of the overlying skull vault have been reported. These changes may be a feature of chronic subdural hematomas in young subjects.

CT gives valuable information about the size of the hematoma and its relationship to the surrounding cerebral parenchyma. CT findings of calcified chronic subdural hematomas were first reported by Debois et al., and other reports have since become available.

The most common symptoms of calcified chronic subdural hematomas in children are seizures and mental retardation, whereas in adults they are headache and seizures. Nevertheless, calcified chronic subdural hematomas in adults sometimes remain asymptomatic. Adhesion between the inner membrane of the hematoma and the brain surface has been reported in relation to intracerebral hematomas. Isu et al. reported a case in which
an asymptomatic calcified chronic subdural hematoma was complicated by a subacute subdural hematoma as a result of moderate head injury. However, the actual symptoms are believed to be due to cerebral atrophy rather than to compression by the hematoma, and surgical intervention will seldom yield satisfactory results.

Based on their own experience and a review of the literature, McLaurin et al. concluded that surgical treatment of calcified chronic subdural hematomas in children had no effect. Mori et al., on the other hand, emphasized that calcified chronic subdural hematomas in children should be removed to encourage mental and physical development of patients as well as to prevent hemorrhage and growth of the hematoma. He concluded that surgical treatment is indicated for symptomatic calcified chronic subdural hematomas in children and young adults. Most authors agree that operation has no effect on long-standing symptoms and advise operation only when there are neurological symptoms of short duration. Thus, surgical indications for calcified chronic subdural hematomas need to be determined on the basis of the patient’s age, symptoms, and length of clinical course.

Operation for asymptomatic calcified chronic subdural hematomas in the elderly is not indicated. It may damage the cerebral cortex and carries the possibility of paresis, intellectual impairment, or epilepsy.

It is expected that calcified chronic subdural hematomas will rarely be seen in the future. The prompt, thorough attention given to head injuries under modern medical care should greatly reduce the number of overlooked and neglected cases.

References


Address reprint requests to: M. Matsumura, M. D., Department of Neurosurgery, Gunma University School of Medicine, 3-39-22 Showa-machi, Maebashi, Gunma 371, Japan.