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Case report

Frontal parosteal lipoma with thickening of diploic space

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ABSTRACT

Parosteal lipoma is a rare benign tumor that is composed mainly of benign mature lipocytes, and it has an intimate association with the underlying affected bone. Parosteal lipoma involving the head and neck is very rare, and there are only two reported cases of parosteal lipoma of the skull in English literature. This paper reports a rare case of frontal parosteal lipoma in a young child with a hard enlargement of the forehead region after blunt trauma. Computed tomography revealed a large soft tissue mass and an osseous projection of the unilateral frontal bone. The pathology report identified lipoma and thickening of diploic space of the frontal bone. Here, we present a new case of parosteal lipoma in the frontal region.

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Introduction

Lipoma is the most common subcutaneous tumor. The parosteal type is a rare tumor accounting for 0.3% of all lipomas, usually asymptomatic, and affecting mainly adults in their 40s.[1] Moreover, parosteal lipoma of the skull is very rare. There have been only two reports of parosteal lipoma involving the head region.[2,3] Many of the characteristics were similar to those in our case; however, the absence of periosteal reaction, the presence of thickening of diploic space and the medical history of trauma were different. Here, we present a new case of parosteal lipoma of the frontal region.

Clinical report

The patient fell from a high place ten months after birth and bruised his forehead on concrete. The swelling persisted and the boy was taken to see a doctor two weeks after sustaining the injury; however, there was no evidence of a bone fracture on the X-rays. Swelling was more pronounced 6 months later. Computed tomography (CT) revealed both thickening of the fat of the forehead under the frontal muscle and thickening of the frontal bone. One year after the injury occurred, the patient visited our department for the first time. His parents were concerned about the swelling on his forehead. We followed up the subsequent history of the patient by yearly Magnetic resonance imaging (MRI) in order to avoid radioactive exposure. MRI revealed that the fat under the frontal muscle had obviously thickened, while the fat of the subcutaneous layer had slightly thickened. MRI also uncovered an expansion of the diploe of the right frontal bone. There were no abnormalities intracranially. Follow-up MRI showed that the submuscular fat and the diploe had thickened gradually.

We planned a surgical procedure to improve the patient's appearance and to make a pathological diagnosis at five years old (Figure 1). A preoperative view of the CT image showed a soft tumor and prominent frontal bony tumor (Figure 2A). Moreover, the frontal bone was associated with expanded diploic space; the outer table of the skull had projected outward and thinned, while the inner table of the skull slightly projected inward (Figure 2B). The area of soft tumor and frontal bony tumor fell within

Figure 1. Preoperative view at five years old.