

# Leptomeningeal cyst: a complication of trivial head injury

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## Abstract

Acute skull fracture can be complicated by a dural tear. This results in an expanding cystic mass with the dura and CSF resulting in the fracture diastasis. The position of the cystic swelling prevents the osteoblast from migrating and this prevents fracture healing. The continuous pulsatile CSF pressure causes resorption of adjacent bone. Trivial trauma in the history is often missed.

## CLINICAL PRESENTATION

A 3 year old presented with a palpable, firm, cystic, pulsatile and non-tender 2X2 cms mass of the left forehead (figure 1) with no signs of inflammation.

### Figure 1

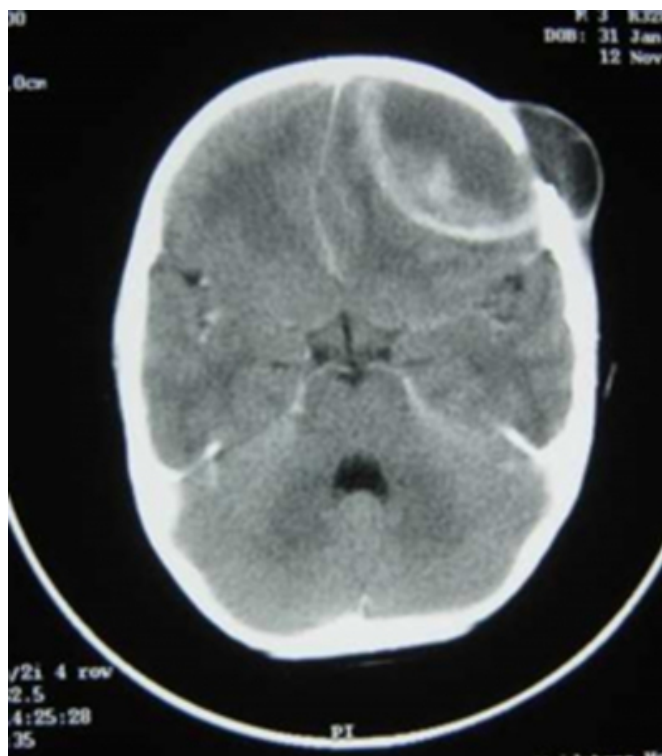
Figure 1



This mass had occurred three weeks prior to presentation and seemed to have grown. On enquiry there was a history of fall from about two feet four weeks ago. Systemic examination was normal. Ct scan revealed an expanding skull fracture, with dural tear. (figure 2)

### Figure 2

Figure 2



## DISCUSSION

The expanding skull fracture is a rare complication of head injury. It occurs in less than 1 % of skull fractures, typically of the parietal bone. Almost exclusively occurring in infants and children under 3 years of age. The pulsatile force of the brain during its period of maximum growth.<sup>1,2</sup> Gross enlargement may occur as early as 4-6 weeks.<sup>3</sup>

This is a result of acute skull fracture which is complicated by a dural tear. CSF from the underlying brain tissue, with

the leptomeninges is able to herniate through the defect in the dura. This is followed by the formation of an encapsulated cyst. The position of the tissue prevents osteoblast from migrating, therefore inhibiting fracture healing, and the continuous pulsatile CSF pressure causes resorption of adjacent bone. The resulting expanding cyst leads to a progressive erosion of the cranial vault. A history of trivial trauma may be missed in an asymptomatic child. Neurosurgical correction is advised.<sup>4</sup>

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