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ASYMPTOMATIC CHRONIC EPIDURAL HEMATOMA IN A CHILD AS A RESULT OF EXTRACRANIAL DECOMPRESSION

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☐ Abstract—Background: Epidural hematoma (EDH) in children is a diagnostic challenge due to its nonspecific clinical presentation. Asymptomatic chronic epidural hematoma is a very rare entity. Reports of spontaneous decompression into the subgaleal spaces are limited with acute epidural hematomas in the literature. Objective: We report a child presenting with chronic epidural hematoma at 15 days after a head trauma. She remained asymptomatic, owing to spontaneous decompression via a skull fracture. We intend to remind emergency physicians to be alert about epidural hematomas in asymptomatic children in the presence of a history of, even minor and distant, trauma. Case Presentation: An 8-year-old girl presented to the Emergency Department with a swelling in the right parietal region. She had fallen at the playground and struck her head on the ground 15 days prior. Computed tomography showed a mixed-density subacute-chronic parietal epidural hematoma with a linear fracture overlying it. There was no evidence of midline shift or ipsilateral ventricular compression. Conclusion: An initially minimal but expanding EDH in a child can remain asymptomatic even in the later phases, owing to the spontaneous decompression through a skull fracture. © 2014 Elsevier Inc.

☐ Keywords—chronic;	epidural	hematoma;	decompres-
sion; asymptomatic; chil	d		

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INTRODUCTION

Epidural hematoma (EDH) is a rare, yet life-threatening, complication of head trauma in children. It often results from a relatively minor trauma (1). An EDH is referred to as chronic when it trails a trauma by 2 to 13 days (2,3). However, there is not an exact definition of chronic EDH regarding the interval between the trauma and the diagnosis. Although there are several reports associating chronic EDH with a variety of symptoms, the asymptomatic presentation of a chronic EDH is very rare (3–5).

Spontaneous decompression of EDHs into the subgaleal space has been reported within 2 days after traumas. We report a child presenting with chronic epidural hematoma 15 days after a head trauma. She remains asymptomatic owing to the spontaneous decompression through a skull fracture.

CASE PRESENTATION

An 8-year-old girl was admitted to the Emergency Department (ED) with a swelling in the right parietal region. Although there was no history of a recent head trauma, her parents stated that she had experienced a ground-level fall at the playground and had struck her head on the ground 15 days prior. She was taken to the ED of a state hospital in another city. Relying on her and the family's reports, she did not have any complaints suggesting injury. She revealed normal neurological

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examination with no external signs of trauma. She had been observed for 6 h and discharged with head injury instructions because her neurological examination was normal. The patient and her parents denied headache, vomiting, fever, seizures, or any change in her mental status by then. She had remained asymptomatic for 13 days. Two days prior to the ED presentation, a swelling had occurred on the right parietal region, expanding slowly. This concerned the family and they brought her to the ED seeking further evaluation. She had no known disease or allergy and was not taking any medication. She had no other complaints. On presentation, the patient was appropriately alert and interactive with her parents and the ED staff. She had no obvious signs other than a large hematoma on her right parietal region over the scalp. The neurological examination showed normal cranial nerves with clear fundi. Motor strength was 5/5 with no pronator drift. Sensory examination was unremarkable. There were no pathologic reflexes. On cerebellar examination, she had no dysmetria on finger-to-nose testing. Her gait was normal, and Romberg testing showed no abnormality. She had no neck pain or tenderness.

The detailed history and physical examination suggested no exact diagnosis. Considering the large and still-growing isolated head swelling with a distant trauma in conjunction with the parental preference, we obtained a cranial computed tomography (CT) scan. The CT scan showed a mixed-density subacute-chronic EDH involving the parietal region of the brain (Figure 1) that was associated with an overlying linear parietal fracture (Figure 2). There was no evidence of midline shift or ipsilateral ventricular compression (Figure 3). The EDH, which consisted of organized clots, was surgically evacuated via a crani-

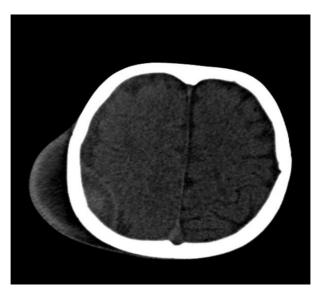


Figure 1. Axial computed tomography scan showing right parietal epidural hematoma containing mixed-type densities.

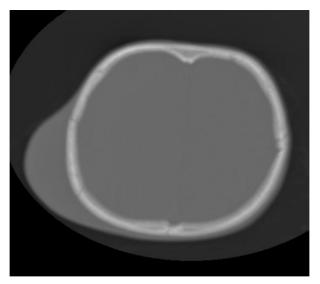


Figure 2. Axial computed tomography scan image with bone window settings indicating right parietal linear fracture.

otomy. The source of the hemorrhage was not identified upon surgery. The patient was discharged after an uneventful 4 days. No symptoms and neurological findings relevant to the injury were identified on control visits at the first and third months after neurosurgery.

DISCUSSION

Chronic EDH is an exceptional entity in childhood that is not well characterized (6). Unlike adults, children have



Figure 3. Coronal computed tomography scan shows no evidence of mass effect.

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