

Rare Cause of Persistent Headache in A Child- Spontaneous Idiopathic Subdural Hematoma

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✓ Chronic subdural haematomas (CHSs) can occur in adults either spontaneously or as a result of accidental trauma. However, CSHs in children mostly result from hematologic disorders or unnoticed minor traumas. We report a rare case of spontaneous chronic subdural haematoma (SCSH) in a 7-year-old child who suffered from severe constant headache without any underlying bleeding diathesis or trauma.

Key words: Headache, chronic subdural hematoma, children, spontaneous

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Çocuk Olguda Sürekli Baş Ağrısının Ender Nedeni- Spontan İdiyopatik Subdural Hematom

✓ Kronik subdural hematomlar (KSH) erişkinlerde spontan ya da travmalara bağlı olarak meydana gelebilir. Bununla birlikte, KSM'lar çocuklarda daha çok hematolojik hastalıklara ya da fark edilmeyen minör travmalara bağlı olarak oluşurlar. Mevcut olguda, altta yatan herhangi bir kanama bozukluğu ya da travma öyküsü olmadan kronik subdural hematom oluşun ve şiddetli baş ağrısından yakınan 7 yaşında çocuk hasta sunuldu.

Anahtar kelimeler: Baş ağrısı, kronik subdural hematom, çocuklar, spontan

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We report a rare case of spontaneous chronic subdural haematoma (SCSH) in a 7-year-old child without any underlying bleeding diathesis. Notably, SCSHs are mostly encountered in children with hematologic disorders or after unnoticed mild traumas. The treatment of SCSHs varies including surgical drainage, subduro-peritoneal shunting and conservative treatment ⁽²⁾. In the literature we revised, we did not encounter any case of idiopathic SCSHs in children over 3 years of age ⁽³⁻⁵⁾.

CASE REPORT

The patient was brought to the outpatient clinic with the complaint of persistent headache for

over 3 months. In his neurologic examination, there was no abnormal finding. Both cranial computed tomography (CT) and magnetic resonance image (MRI) has shown left fronto-temporal huge chronic subdural haematoma with considerable mid-line shift (Figure 1). Routine laboratory studies and blood tests did not show any abnormal findings either.

Additionally, all coagulation parameters and factors were screened to identify any possible coagulative disorder. We did not identify any recent trauma and any clue that might be suggestive of child abuse. Considering the size of the hematoma and the severity of headache, we operated on the patient by opening 2-burr holes and

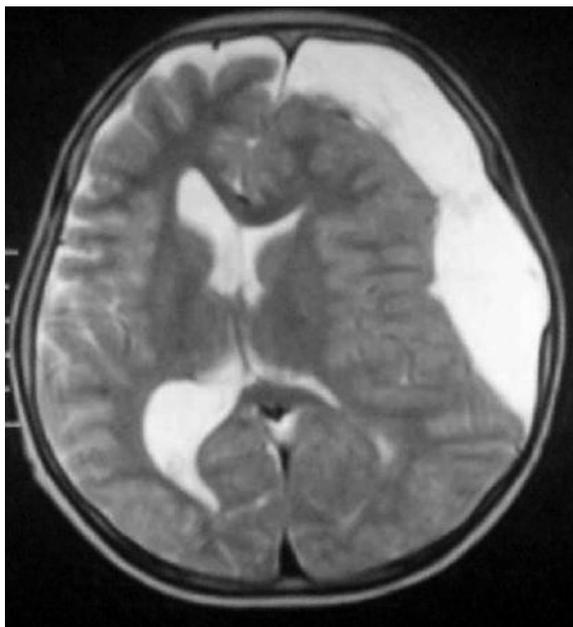


Figure 1.



Figure 2.

evacuated the hematoma. The patient did promptly relieve from the headache and was discharged 2 days after the surgical drainage. Post-operative CT in the third month has shown near complete resolution of hematoma with no mid-line shift (Figure 2).

DISCUSSION

Chronic subdural haematomas (CHSs) are usually produced by minor trauma and occur predominantly in the older person ⁽⁴⁾. CHSs can also occur in children either spontaneously or as a result of accidental trauma ^(1,5,6). However, SCSHs in children mostly result from hematologic disorders or unnoticed minor traumas. Idiopathic thrombocytopenic purpura is one of the common causes of bleeding diathesis and may cause SCSHs ⁽⁷⁾. Regarding factor deficiencies, several factor deficiencies in the coagulative cascade were reported to cause SCSHs in children as well. In our case, we could not identify any minor or major trauma or any clues of physical findings attributable to child abuse ^(5,8). However, many authors still believe that child

abuse is the predominant cause of such cases ^(2,3,9). On the other hand, reports of accidental cases were published ⁽⁸⁾. In our case pediatric consultation and extensive hematological studies did not show any abnormal findings. Factors in the coagulation cascade were also studied meticulously in order not to miss any subtle factor deficiency which may lead to bleeding diathesis as previously reported in the literature ⁽⁷⁾.

Concerning the etiology of spontaneous subdural haematomas, spontaneous intracranial hypotension was reported to cause bilateral hematomas in adults ⁽⁴⁾. However, there is no child case reported in the literature. SCSHs may occur following mild unnoticed head trauma or due to sudden movement of head with rapid to-and-fro motion, thus the brain and bridging superficial cortical veins move at a different rate than the calvarium and attached dural venous sinuses. As a result, the rupture of cortical veins may create a haematoma in the subdural space ^(2,10). In our case, there was no identified bleeding diathesis, child abuse or underlying major or subtle trauma history thus we concluded that the causation of

chronic subdural hematoma in this child was purely idiopathic.

CONCLUSION

SCHSs should be considered in the differential diagnosis of persistent headaches in children.

REFERENCES

1. **Billmire ME, Myers PA.** Serious head injury in infants: accident or abuse? *Pediatrics* 1985; 75:340–2.
2. **Chen CY, Zimmerman RA, Rorke LB.** Neuroimaging in child abuse: a mechanism-based approach. *Neuroradiology* 1999; 41:711-22.
3. **De Villiers J.** Unexpected natural death of cerebral origin in medicolegal practice. *Forensic Sci* 1975; 5:11-9.
4. **Emonds N, Hassler WE.** New device to treat chronic subdural hematoma-hollow screw. *Neurol Res* 1999; 21:77-8.
5. **Feldman KW, Bethel R, Shugerman RP, et al.** The cause of infant and toddler subdural hemorrhage: a prospective study. *Pediatrics* 2001; 108:636-46.
6. **Maxeiner H.** A postmortem view on “pure” subdural hemorrhages in infants and toddlers. *Clin Padiatr* 2002; 214:30-6.
7. **Seckin H, Kazanci A, Yigitkanli K, et al.** Chronic subdural hematoma in patients with idiopathic thrombocytopenic purpura: A case report and review of the literature. *Surg Neurol.* 2006; 66:411-14.
8. **Vinchon M, Defoort-Dhellemmes S, Desurmont M, et al.** Accidental and non-accidental head injuries in infants: A prospective study. *J Neurosurg (Pediatrics)* 2005; 102:380-4.
9. **Zimmerman RA, Bilaniuk LT.** Pediatric head trauma. *Neuroimaging Clin N Am* 1994; 4:349-66.
10. **Zimmerman RA, Bilaniuk LT, Bruce D, et al.** Computed tomography of craniocerebral injury in the abused child. *Radiology* 1979; 130:687-90.