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A Case of Subgaleal Hematoma in a Child from Combing Hair

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ABSTRACT

A subgaleal hematoma is the collection of blood in the subgaleal space of the scalp. This entity is mostly seen in neonates as result of birth trauma. In children, it has been described in both accidental and non-accidental trauma and presents as painful scalp swelling. Subgaleal hematoma, outside the setting of birth or other trauma, is rare. In this report, we describe a case of a massive subgaleal hematoma in a child from non-abusive hair pulling.

Keywords
Subgaleal hematoma, Scalp, Trauma.

Abbreviations
SGH: Subgaleal Hematoma.

Case Report
A three-year-old fully immunized, previously healthy male presented to the emergency department with swelling on the left side of the scalp. The mother noticed the swelling a day prior to the visit when she was brushing his long hair. This caused pain and crying in the child. The family denied any trauma, fall or fights prior to the onset of swelling. There was no altered consciousness, vomiting, lethargy, bleeding from nose, mouth, or ears. The child was otherwise healthy and had no change in behaviour or activity. There was no past or family history of bleeding disorders. The child had a circumcision at birth, which was uneventful.

On physical exam, a boggy swollen hematoma measuring 12cm x 12cm x 3cm on the left parietal region was noted. This area was covered with long, non-braided hair. No other areas of gross ecchymosis, swelling or trauma were appreciated.

Hospital Course
Initial labs showed a haemoglobin of 11.6 g/dL and a platelet count of $393x10^3$/uL. The liver function tests and coagulation profile were also normal with an INR of 1.04. A CT scan of the head showed a left parietal subgaleal bleed with no intracranial bleed (Figure 1). Child abuse was suspected initially, and child was admitted to the paediatric floor rule out any possible non-accidental trauma. The social worker did not identify any concerns in the family and cleared the family. The ophthalmological examination was normal with no signs of retinal bleeds. A diagnosis of left parietal subgaleal bleed from hair pulling while combing hair was made, and neurosurgery was consulted. They recommended for the bleed to be treated conservatively with pain management and follow up for bleed resorption. The child was discharged home with follow up with his paediatrician, and the hematoma eventually resolved completely in two months. The total duration of hospital stay was two days.

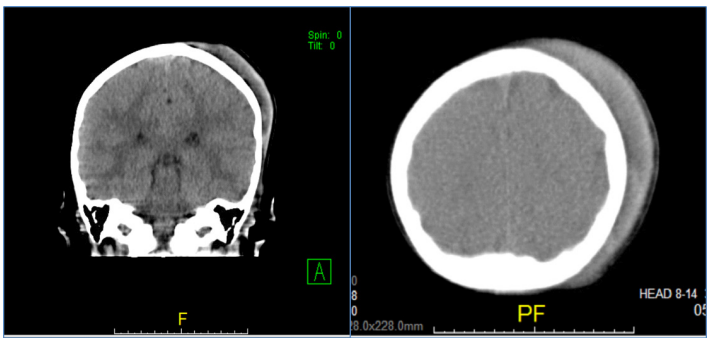

Figure 1: CT scan with left parietal subgaleal bleed.

Discussion

Subgaleal hematoma (SGH) is a collection of blood in the potential space covered by the galea aponeurotica from the orbital ridges anteriorly to the nuchal ridge of the neck posteriorly. The subgaleal space includes a network of a vast number of emissary veins that connect superficial scalp veins and subdural venous sinuses. Shearing forces can lead to the rupture of these veins with the accumulation of blood known as SGH. Clinically it is possible to differentiate this from cephalohematoma as the latter does not cross suture lines.

SGH in neonates has been reported as trauma during birth, which can be severe enough to cause shock [1]. SGH in older children was mostly seen in the setting of trauma and was often linked to child abuse. Most children present with the accidental discovery of the swelling with minimal symptoms of pain and headache [2,3]. There have been case reports of accidental hair pulling as a mechanism of SGH in some cases [2-12]. A few of these cases happened after hair braiding or combing as in our case. Sometimes, SGH can be the first manifestation of underlying coagulopathy such as von Willebrand disease and factor XIII deficiency [13,14] that requires haematological workup with at least complete blood counts, prothrombin time, and partial thromboplastin time [13]. This workup did not reveal any abnormality in our patient.

The management of SGH is often conservative. The hematoma often resolves spontaneously or by using a compression bandage within a few weeks. Aspiration can be reserved for larger hematomas, but re-accumulation of blood is a complication that usually requires re-aspiration [6,7,9]. A complication reported after aspiration is an infection followed by a recurrent bleed [9]. Complications of SGH include proptosis, ophthalmoplegia, corneal ulceration, vision loss, facial edema or airway compromise when blood tracks beyond the anatomical boundaries and spread to the orbits, face, or neck. This may require a more aggressive treatment approach with aspiration followed by tight bandaging or surgical drainage [4,13,14].

Conclusion

SGH is the collection of blood in the subgaleal space of scalp. This entity is mostly seen in neonates as a result of birth trauma. In children, it has been described in both accidental and non-accidental trauma and presents as a painful scalp swelling. SGH outside the setting of birth or other trauma is rare.

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