Subgaleal hematoma

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Subgaleal hematoma is a type of cephalhematoma in the potential space between the periosteum and the galea aponeurosis.

They don't calcify.

Its occurrence beyond the neonatal period is rare and is often associated with head trauma involving tangential or radial forces applied to the scalp causing emissary veins traversing the subgaleal space to be ruptured.

Epidemiology

In patients with traumatic intracranial hemorrhage or skull fractures, the incidence is increased.

In the newborn infant is rare, occurs early, and often bears serious consequences.

Etiology

It most commonly occurs after vacuum assisted delivery, but may also be seen following head trauma.

Diagnosis

The diagnosis is generally a clinical one, with a fluctuant boggy mass developing over the scalp.

Laboratory studies consist of a hematocrit evaluation.

Differential diagnosis

General imaging differential considerations include

Cerebrospinal fluid (CSF) from collecting in the subcutaneous space.

Scalp hematoma

Caput succedaneum

Subperiosteal hematoma

On certain MRI sequences also consider
Subgaleal lipoma

Epidural hematoma association

Although rare, rapid spontaneous resolution of epidural hematomas in the pediatric population has even been reported \(^2\).

Numerous theories have been proposed to explain the pathophysiology behind these cases, including egress of epidural collections through cranial discontinuities (fractures/open sutures), blood that originates in the subgaleal space, and bleeding from the cranial diploic cavity after a skull fracture that preferentially expands into the subgaleal space \(^3\).

Treatment

Children born by use of vacuum extractor or forceps require careful monitoring by the nursing staff throughout their stay in the maternity unit \(^4\).

In most cases, conservative treatment is the preferred option because adhesion between the galea aponeurotica and the periosteum restricts the extent of the hematoma. In special cases, however, the hematoma enlarges extraordinarily past these adhesions, and the patients thus affected suffer from progressive anemia followed by the lethargy and headache resulting from the excessive distension of the skin and the subcutaneous tissue. In such cases, hematoma removal is performed in order to relieve the symptoms \(^5\).

The therapeutic strategy for massive subgaleal hematoma is individualized. However, treatment for massive subgaleal hematoma with skull fracture should not be considered the same as for hematoma without skull fracture. Emergent surgery is recommended before neurological deterioration is recognized in the patient if damage to the dural sinus is suspected \(^6\).

Endoscopic techniques have been advanced along with the recent trend toward invasive neurosurgery. These minimally invasive techniques can allow sufficient removal of subgaleal hematoma with minimal morbidity, especially in patients such as ours. In addition, the utility of endoscopic techniques for the removal of subgaleal hematoma should be confirmed after long-term follow-up \(^7\).

Complications

A 3 kg baby was delivered by cesarean section after prolonged labor. He had massive subgaleal hematoma. He developed anemia requiring packed cell transfusions and hyperbilirubinemia requiring a total of seven exchange transfusions and highly intensive phototherapy. There were no adverse complications of the hyperbilirubinemia or the exchange transfusion \(^8\).


