

Cephalohematoma

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Epidemiology

A cephalohematoma is noted in ~1%–2% of spontaneous vaginal deliveries and ~3%–4% of forceps or vacuum-assisted deliveries.

The most common location is under the right parietal bone and may be associated with an underlying skull fracture. Resolution typically occurs without treatment by 3–4 months of age. Anemia and hyperbilirubinemia are common sequelae, but cephalohematomas rarely become spontaneously infected.

In 2013 there was the first report describing a possible association between parvovirus B19 infection and cephalhematoma. Parvovirus B19 infection should be considered in the differential diagnosis of children who present with unexplained hemorrhage such as cephalhematoma or petechiae ¹⁾.

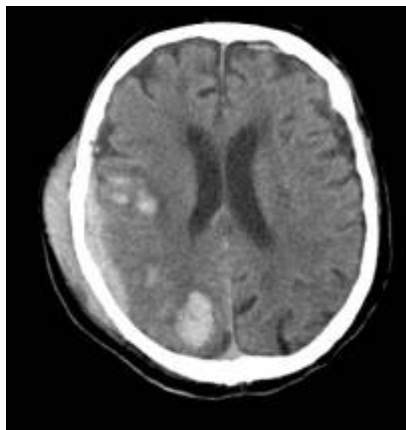
Classification

[Subgaleal hematoma](#)

[Subperiosteal hematoma](#)

see also [Spontaneous subaponeurotic fluid collection](#)

Diagnosis



Right frontotemporoparietal [intracranial acute epidural hematoma](#), up to 1 cm. thick, underlying a broad line of right temporoparietal Right parietal [subgaleal hematoma](#), up to 1cm. of thickness.

[Hemorrhage](#) under the [scalp](#)

Not to confuse with [subperiosteal hematoma](#).

Treatment

Surgical drainage of uncomplicated cephalohematomas is contraindicated because of the usually benign course, the propensity for reaccumulation with resultant hemodynamic instability, and the possibility of introducing microorganisms into a sterile space.

Complications

Anemia and hyperbilirubinemia.

[Calcified cephalhematoma](#)

Infection

Clinicians should be aware that cephalohematoma is a potential site of infection after fetal monitoring.

The incidence of associated system infection is high and may result in mortality. Appropriate diagnostic and therapeutic measures should be undertaken promptly if there are infectious signs ²⁾.

A 30-day-old infant presenting a E. coli meningitis with recurrence 5 days after stopping antibiotics. The clinical investigations concluded to the diagnosis of osteomyelitis of the parietal bone probably as a consequence of the infection of a cephalohematoma due to a wound caused by a foetal monitoring. Cephalohematoma is frequent in infant and is usually without consequences. Though rare, cases of infected cephalohematomas are described in the literature, with possible complications of meningitis (E. coli) and osteomyelitis. Sometimes the both pathologies are associated. A secondary infection of cephalohematomas must be taken in consideration when the etiology of a E. coli meningitis is not quite clear enough. In this situation, looking for an osteomyelitis whose presence may influence the

infant's treatment is needed. ³⁾.

Differential diagnosis

A [subgaleal hematoma](#) is an accumulation of blood within the loose [connective tissue](#) of the [subgaleal space](#), which is located between the [galea aponeurotica](#) and the [periosteum](#)

Unlike a cephalohematoma, a [subgaleal hematoma](#) can be massive, leading to profound hypovolemic shock.

Case report

Age: 80 years

Gender: Female

Known [hypertension](#) (HTA).

History of [cholelithiasis](#).

[Valsartan/Hydrochlorothiazide](#) tablets 160 mg/25 mg.

The patient was attended by [SAMU](#) due to [dizziness](#) and [presyncope episode](#) resulting in a [fall](#) with [traumatic brain injury](#) (TCE) and frontoparietal [Cephalohematoma](#).

The patient received 300 mg of [amiodarone](#). Additionally, the patient took Couldina (containing [ephedrine](#)) yesterday

[COVID-19 vaccination](#): 3 doses, last administered in 2021.

No [Influenza vaccine](#) this year.

Vital Signs:

[Blood Pressure](#): 180/80 mmHg

[Heart Rate](#): 130 bpm

[Oxygen Saturation](#): 98%

Conscious and oriented in all spheres with preserved [language](#). General good condition, normal color, well-hydrated, well-perfused, and eupneic. Arrhythmic cardiac auscultation without audible murmurs or rubs. Respiratory examination with preserved vesicular murmur. Soft abdomen, non-tender, no signs of peritoneal irritation, no visceromegaly or masses. Negative Blumberg and Murphy signs. No edema or signs of deep vein thrombosis in lower extremities. No neurological focalities or neck stiffness. Left periorbital and temporal hematoma.

Elevated glucose, urea, and chloride levels. Elevated creatinine with reduced glomerular filtration rate. Elevated CRP, pro-BNP, troponin T, and ferritin.

Gasometry

Slightly acidic pH, normal pCO₂ and pO₂. Elevated lactate. Elevated prothrombin time (Quick index) and [D-dimer](#).

[Leukocytosis](#) with increased neutrophils. Anemia with low red blood cell count. Elevated mean corpuscular volume (MCV). Coagulation

Normal APTT ratio, INR, and thrombin time. Elevated D-dimer.



Cerebral CT without contrast shows small frontal left subarachnoid hemorrhage and periventricular/subcortical white matter hypodensities suggestive of microvascular leukoencephalopathy.

Chest X-ray is unremarkable.

COVID Status:

Positive antigen test.

Management:

[Metoprolol](#) 5 mg IV initiated on arrival.

Recommended treatment for [atrial fibrillation](#): [Eliquis](#) 5 mg every 12 hours indefinitely and Bisoprolol 2.5 mg daily.

Cardiology [appointment](#) requested for further evaluation before discharge.

Conclusion: The patient presented with a traumatic brain injury, subarachnoid hemorrhage, and [atrial fibrillation](#). She has been admitted for observation, and the interdisciplinary team will manage her care. Follow-up with cardiology and neurosurgery is planned to address both the cardiac and neurological aspects of her condition.

1)

Takeuchi M, Shiozawa R, Hangai M, Takita J, Kitanaka S. Cephalhematoma and petechial rashes associated with acute parvovirus B19 infection: a case report. BMC Infect Dis. 2013 Oct 7;13:465. doi: 10.1186/1471-2334-13-465. PubMed PMID: 24093148; PubMed Central PMCID: PMC3851625.

2)

Chang HY, Chiu NC, Huang FY, Kao HA, Hsu CH, Hung HY. Infected cephalohematoma of newborns: experience in a medical center in Taiwan. Pediatr Int. 2005 Jun;47(3):274-7. PubMed PMID: 15910450.

3)

Van Helleputte C, Dupont V, Barthels S, Aeby A. [Escherichia coli meningitis and parietal osteomyelitis in an infant: a rare complication of cephalohematoma]. Rev Med Brux. 2010 Jan-Feb;31(1):57-9. French. PubMed PMID: 20384053.

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