

Subaponeurotic fluid collection

Spontaneous subaponeurotic fluid collection

Sub-aponeurotic fluid collections (SFCs) in the neonatal period are poorly described in the literature. We describe the occurrence, possible etiologies and treatment of sub-aponeurotic fluid collections following the neonatal period.

Case description: We present 3 cases of previously healthy children who developed soft, fluctuant, extracranial masses several weeks after birth. All 3 children were seen by a pediatric neurosurgeon after parents noticed scalp masses between 5 and 9 weeks of age. All 3 children were found to be otherwise healthy. Two of the children were born via C-section and 1 child was born vaginally. The vaginal delivery was described as difficult and utilized vacuum assist. Scalp electrodes were placed in all 3 children for intensive monitoring during labor. These children received plain skull x-rays to assess for abnormalities, and 2 of the children underwent a non-contrast brain CT scan to better characterize the fluid collection. Plain x-rays and CT scans showed no abnormalities of the skull or ventricles. In both patients who underwent a CT scan, a soft tissue prominence was noted with a Hounsfield unit similar to water. All cases resolved between 5 and 9 weeks after initial presentation, with no long-term sequelae.

Conclusion: SFCs presenting after the neonatal period are usually associated with benign soft tissue swellings. Use of fetal scalp electrodes has been shown to cause cerebrospinal fluid (CSF) leakage in the neonatal period and may result in delayed SFC. This condition is benign, and the recommended course of treatment is conservative management ¹⁾.

¹⁾

Petraglia AL, Moravan MJ, Marky AH, Silberstein HJ. Delayed sub-aponeurotic fluid collections in infancy: Three cases and a review of the literature. Surg Neurol Int. 2010 Jul 21;1:34. doi: 10.4103/2152-7806.66622. PMID: 20847915; PMCID: PMC2940094.

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