 DOI: 10.18231/2455-6793.2017.0031

Cephalohematoma in a 17 year old male-a case report

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Abstract

Cephalhematoma is exclusively a disease of newborn and it is very rare in adult. It resolves spontaneously on conservative treatment although it may cause vision loss due to retrograde extension in some patient, in such condition surgical treatment is immediately required.

Keywords: Cephalhematoma, Adult onset, Spontaneous, Vision loss

Introduction

Cephalhematoma is a subperiosteal collection of blood resulting from rupture of the superficial veins between the skull and periosteum. It may occur in as many as 2.5% of all live birth.(1) Mostly it is unilateral and approximately 15% occur bilaterally.(2) The incidence of an associated skull fracture is 5% in unilateral lesions and 18% in bilateral lesions.(3)

It occurs most frequently in neonatal period and is very rare at other times of life.(4)

Most common location is over parietal bone. Rarely occipital cephalhematoma may be noted.(5)

Case Report

17 years old boy presented to emergency with c/o swelling of whole scalp gradually involving peri orbital soft tissue leading to closure of both eyelids for 2 days. He also complaint of headache only on lying down position with no c/o vomiting and any type of involuntary movement. There was no h/o fever, awareness of mass/bone pains/jaundice rash, any bleeding diathesis, blood transfusion and no family h/o bleeding disorder. There is no history of spontaneous swelling in the past in any part of the body

O/E-Pt. was conscious, co-operative oriented. Pulse- 70/min, BP-116/80 and afebrile. On local examination swelling was diffuse involving whole scalp and periorbital region and was fluctuant on palpation. Systemic examination was normal. Hemoglobin was 12gm/dl. White blood count was 9890/cumm with neutrophils 60% and lymphocytes 35%. Platelets were 190 lacs/cumm. Total serum bilirubin was 0.90mg/dl with conjugated- 0.3mg/dl. Total protein-6.9 mg/dl with albumin-4.4mg/dl. SGPT-21 IU, SGOT-22 IU, and alkaline phosphate was 560 IU. Prothrombin Time-15 sec, Thrombin Time-14 sec and aPTT-33 sec, Bleeding time 2.30 min., clotting time 5.45 min, Blood urea 26.4 mg/dl, serum creatine 0.7 mg/dl. Patient was HIV negative and HbSAg negative. NCCT head done showed soft tissue swelling surrounding periostium with no underlying bony deformity or fracture suggestive of cephalhematoma.

Platelet aggregation studies with ADR, ADP, A.A and Ristocetin was normal. Von Willebrand factor antigen was normal.

Patient was kept under observation and supporting treatment with injection vitamin K 10 mg for 3 days intravenously, injection tranexamic acid 1g intravenous and fresh frozen plasma 3 unit was given. Patient responded to treatment and swelling subsided gradually and was discharged from the hospital on 5th day without any neurosurgical intervention. Patient was followed up for 1 year and is completely normal with no recurrence of cephalhematoma.

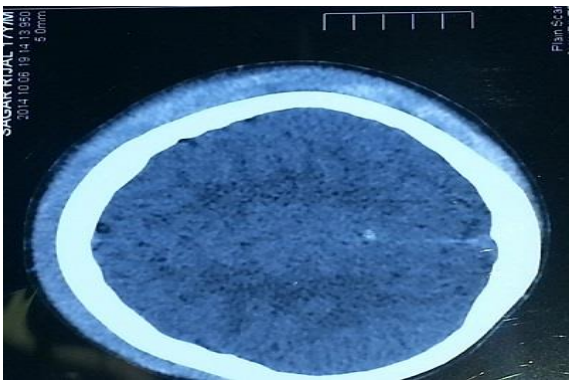
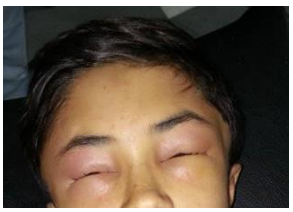
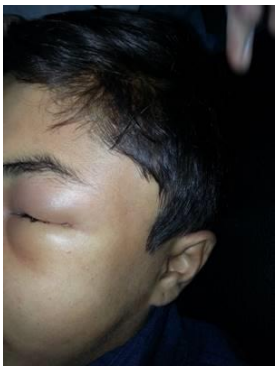


Fig. 1: NCCT skull of the patient showing soft tissue swelling around skull(black arrow)





Discussion

Cephalhematoma is exclusively a disease of newborn. It is caused by mechanical forces during delivery (i.e. it is clearly a traumatic lesion in nearly all cases). It occurs generally due to unavoidable obstetrical factors, relating to the size of skull and birth canal and to use of forceps thus causing tight apposition of subcutaneous structure to the periosteum.[5] Less common causes include vascular abnormalities, aneurysm, arterial dissection, blood coagulation disturbances, and vascular wall frailty. This report describes a giant cephalhematoma with right ocular protrusion and anemia with no identifiable cause in a 13-year-old boy. Rapid recovery was achieved by surgical drainage and prompt dressing.[6] It presents as a fluctuant swelling mostly overlying parietal bone which do not cross suture lines.[3]

Cephalhematoma is rarely of clinical significance in the children from the neurological point of view unless a complicating intracranial lesion is present. Essentially it resolves in few weeks to months. It doesn't require any specific treatment. In some cases lesions get calcified and results initially in hard skull protuberance which gradually disappear in few months. Rarely it may get infected causing meningitis which requires treatment.[5] In adults it may cause serious complication due to retro orbital extension of hematoma such as unilateral amaurosis fugax, in this condition therefore urgent surgical intervention is needed if there is any history of diminished vision.[4]

The degree of acute blood loss rarely requires urgent intervention and evacuation of lesion is contraindicated.

In another case report by Fujikwara et al A 14-year-old boy presented with subperiosteal cephalhematomas in bilateral parietotemporal sites after a minor head injury. Magnetic resonance (MR) imaging showed that one of the hematomas had progressed beyond suture lines, and spread under the temporal muscle layer. Progressive enlargement of the cephalhematomas occurred despite medical and needle aspiration treatment. Surgery found that the hematoma had separated the periosteum from the skull bone surface, and the periosteum had lost the tight attachment to the suture lines. Continuous suction-drainage reduced the size of the hematomas without complications. MR imaging can identify subperiosteal cephalhematomas. The relationship of the hematoma and the temporal muscle may be the key MR imaging finding for the diagnosis of cephalhematoma. They suggested that some juvenile cephalhematomas may be a different clinical entity from those occurring in neonates.[7]

In my case the patient is 17 yrs old having cephalhematoma with all clinical parameters within normal limit and no history of trauma and also there is no family history. So this is a rare case of spontaneous cephalhematoma presenting in adolescence.

Reference

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