Vitamin K Deficiency Bleeding Masquerading as Capillary Hemangioma: Case report

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Abstract:

Capillary hemangiomas are common primary benign tumors of the orbit in children but very rarely bleeding disorders may mimic capillary hemangioma. We present a case of bleeding disorder in a two and a half month old female of Indian origin masquerading as capillary hemangioma. The rarity of such a presentation led us to report the case.

Key Words:

Capillary hemangioma, benign tumors, Vitamin K deficiency

Introduction:

Capillary hemangioma, also known as a benign hemangioendothelioma, is the most common benign periorbital vascular tumor of childhood. It is present in 1-2% of all births. There is a 3:1 ratio of females to males. The incidence of orbit and eyelid hemangiomas is 1/10 that of systemic hemangiomas, which occurs in 10% of all children by 1 year of age.[1]

A periorbital hemangioma may appear as a superficial cutaneous lesion, subcutaneous lesion, deep orbital tumor, or combination of these types. Approximately one-third of lesions are visible at birth, with the remainder manifest by 6months of age. There is typically an initial rapid growth phase within 6 months of diagnosis, followed by a period of stabilization and subsequent involution over several years. It is estimated that approximately 75% regress to some extent by the time the child reaches 7 years of age.

This is in contrast to another known group of childhood vascular anomalies, vascular malformations. Vascular malformations, such as lymphangiomas and arteriovenous malformations, are present at birth and are characterized by very slow growth with persistence into adult life.[2,3]

Case Report:

A two and a half month old female infant was brought to the Emergency Department of Jawaharlal Nehru Medical College and Hospital, Aligarh Muslim University, Aligarh on 2nd May,2016 with the chief complaints of fever for the last 7 days, nodular bluish swelling over parietal area of scalp, sternum and back for the last 5 days, bluish discoloration and progressive swelling over right upper eyelid for 1 day.There was also history of nasal bleed 7 days back. There was no history of similar complaints or any spontaneous bleeding episode in the past or in any of the family members.

On examination:

Vitals and systemic examination were within normal limits.

Anthropometry:- Weight- 4 kg, Height- 56 cm, Head circumference- 36 cm, Chest circumference- 35 cm, Mid upper arm circumference- 11 cm.

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Indices:- W/A- 78%, H/A- 98% and W/H- 83%.

The infant was partially immunized for her age and was exclusively breastfed.

Ocular examination:

Right Eye- Swelling and ecchymosis of upper eyelid was present along with bulging out of upper palpebral conjunctiva due to sub-conjunctival hemorrhage. Cornea was clear and pupil was slightly sluggish reacting. Red glow was faint.

LE- Anterior segment was within normal limits, pupil was of normal size and normally reacting. Red glow was present.

On the basis of history and examination, differential diagnosis of capillary hemangioma and lymphangioma were made and patient was prescribed beta-blocker for local application.

The patient was advised bleeding profile, contrast enhanced MRI brain and orbits.

Haemogram- Within normal limits

Bleeding profile-

PT-INR :- 6.1, BT :- 2 min 40 seconds, CT :- 2 min 50 seconds

MRI findings revealed-

- A peripherally enhancing altered signal intensity lesion in pre-septal space of right orbit with small loculated hematoma in intraorbitalextraconal component on superior aspect.
- Patchy bleeding foci in B/L deep frontal lobes, occipital horn of left lateral ventricle and 4th ventricle.

On the basis of bleeding profile and MRI report, diagnosis of bleeding disorder due to vitamin K deficiency was made and patient was infused 1 unit of Fresh Frozen Plasma and 2mg of vitamin K was given intravenously for 5 days.

After 5 shots of vitamin K, PT-INR was 1.283 and the right upper eyelid resolved slowly.

Discussion:

Prevention of vitamin K deficiency bleeding (VKDB) with intramuscular vitamin K is of primary importance in the medical care of neonates. A single dose of intramuscular vitamin K after birth effectively prevents classic vitamin K deficiency bleeding. Conversely, oral vitamin K prophylaxis improves coagulation test results at 1-7 days, but vitamin K administered by this route has not been tested in randomized trials for its efficacy in preventing either classic or late vitamin K deficiency bleeding.[4,5]

Immediately administer vitamin K subcutaneously (hold pressure on the site) for any infant in whom vitamin K deficiency bleeding is suspected or who has serious, unexplained neonatal bleeding.

Note the following:

- IM administration can result in a hematoma because of the coagulopathy.
- Intravenous (IV) administration of vitamin K has been associated with anaphylactoid like reactions.
- Fresh frozen plasma may be considered for moderate-to-severe bleeding.
- Life-threatening bleeding may also be treated with prothrombin complex concentrates (PCC).
- Because the bleeding in classic vitamin K deficiency bleeding usually is not life threatening, a single dose of parenteral vitamin K is sufficient to stop the bleeding and return prothrombin time (PT) values to the reference range.

Infants with evidence of intracranial bleeding may require transfer to a level III nursery after stabilization with subcutaneous vitamin K and other aspects of supportive care.

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