

SPOT DIAGNOSIS (IMAGE GALLERY)



NEUROBLASTOMA WITH EYE INVOLVEMENT

Rakesh Kumar, Binay Ranjan, Manjul Vijay

Department of Pediatrics, Katihar medical college, Katihar, Bihar, India.

Address for Correspondence: Rakesh Kumar, Department of Pediatrics, Katihar medical college, Katihar, Bihar, India. Email: drjaiswalrakesh@yahoo.co.in

A 10 month old girl child came in our out-patient department with complains of dark circles (blackening) around both eyes and occasional fever. On examination, the child was afebrile, markedly pale and very irritable. She also had periorbital hyperpigmentation and ecchymosis and mild proptosis bilaterally (Figure 1). There was no history of trauma or abuse. On abdominal

examination, liver was palpable 2cm below the right subcostal margin. Routine hemogram showed pancytopenia with haemoglobin of 5.1gm, dl, white cell count 3800, cumm and platelets 30,000, cumm. In order to find out the cause of pancytopenia, bone marrow examination was done which revealed hypocellular marrow with infiltration with neuroblasts. With a provisional diagnosis of neuroblastoma, urinary vanillylmandelic acid level was advised which came to be very high. CT scan of abdomen showed left suprarenal adrenal mass with stippled calcifications. Histopathological examination of the mass confirmed the diagnosis of neuroblastoma.

What is the eye lesion called?

Raccoon eyes. Neuroblastoma (NB) is the fourth most common malignancy of childhood preceded by leukaemia, central nervous system tumour and lymphomas. More than 50 percent of patients with NB present with signs and symptoms of metastatic disease. Patients with metastasis to retrobulbar region present with proptosis (1,2). The raccoon eyes appearance in NB is probably related to obstruction of the palpebral vessels (branches of the ophthalmic and facial vessels) by tumour tissue in and around the orbits (1,2). The present case was unique because apart from anaemia, the only major finding was raccoon eyes in the patient. This was probably because of early metastasis to periorbital region, than in other organs. Only one similar case has been reported recently from outside India (3). The correct diagnosis of the condition is sometimes delayed because of work up for trauma or child abuse (1,4). Apart from NB, other malignancies associated with raccoon eyes include multiple myeloma, lymphoma and Kaposi's sarcoma (4). Traumatic conditions like thoracic crush injuries, maxillofacial trauma, acute subdural bleeding or just plucking of eyebrows are also known to cause raccoon eyes (5). Other conditions associated with raccoon eyes are migraine, chronic cocaine abuse and endocrine problem like myxoedema (5). The present case highlights the importance of raccoon eyes as one of the presenting sign of neuroblastoma in children.

References:

1. Timmerman R. Raccoon eye and neuroblastoma. N Engl J Med 2003; 349: e4.
2. Ahmed S, Goel S, Khandwala M, Agrawal A, Simmons IG. Neuroblastoma with orbital metastasis: ophthalmic presentation and role of ophthalmologists. Eye 2006; 20:466-70.
3. Moran DE, Donoughe V. Periorbital ecchymosis ('raccoon eyes') as the presenting feature of neuroblastoma. Pediatr Radiol 2010; 40: 1710.
4. Gumus K. A child with raccoon eye masquerading as trauma. Int Ophthalmol 2007; 27: 379-81.
5. Kandogan T, Aydar L, Yalciner B. Bilateral black eyes "raccoon eyes" resulting from plucking of eyebrows. Swiss Med Wkly 2005; 135:160.



E-published: May 2013. **Art#25, DOI No. :** 10.7199/ped.oncall.2013.25