

Spontaneous periorbital ecchymosis: a rare presentation of acute lymphoblastic leukaemia

Aditya Jandial, Kundan Mishra, Alka Khadwal, Pankaj Malhotra

Department of Medicine,
Postgraduate Institute of
Medical Education and
Research, Chandigarh, India

Correspondence to
Dr Kundan Mishra,
mishrak20@rediffmail.com

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DESCRIPTION

A 45-year-old woman presented with spontaneous discolouration around the left eye for 1 week. She also gave a history of easy fatigability for 1 month. There was no history of any preceding injury in the head and neck area. She denied any headache, vomiting or visual disturbances. Examination showed hepatosplenomegaly and ecchymosis around the left eye (raccoon eye), along with subconjunctival haemorrhage (figure 1A). Her fundus examination was unremarkable. Her haemoglobin was 138 g/L, white blood cell count was $51 \times 10^9/L$ and platelet was $19 \times 10^9/L$. Her peripheral blood smear had 24% blast with CD34, CD10 and CD19 positivity on flow cytometry, confirming a diagnosis of acute lymphoblastic leukaemia. A biopsy from the periorbital area could not be done due to denial of consent from the patient. She was managed with chemotherapy and transfusion support. She showed gradual improvement in periorbital ecchymosis and took 2 weeks to resolve (figure 1B).

Periorbital ecchymosis or raccoon eye or panda sign is commonly seen in surgical emergency and results from accidental injuries to the base of the skull. It is a useful clinical sign that demands urgency in further evaluation and correlates well with the radiological sign of base of skull fracture.¹ However, trivial injury-induced or non-accidental or spontaneous raccoon eye can develop in a variety of medical conditions like migraine, amyloidosis, multiple myeloma, acute leukaemia and neuroblastoma.² Spontaneous periorbital ecchymosis results due to fragile capillaries or coagulopathy, however can also be a feature of a metastatic disease.³ The unilateral raccoon eye in a systemic disease has been reported before, but the cause remains elusive. The possible hypothesis to explain this rare finding includes trivial trauma (unilateral, unnoticed) and anatomical variation. The treatment is directed at the underlying aetiology, which is unfolded by history, clinical examination and investigation.

Learning points

- ▶ Periorbital ecchymosis (raccoon eye or panda sign) is a common clinical sign of skull base injury resulting from accidental injuries.
- ▶ Spontaneous periorbital ecchymosis harbingers a variety of medical disorders.
- ▶ An urgent clinical evaluation is compulsory, which unfolds the underlying disease.

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REFERENCES

- 1 McPheeters RA, White S, Winter A. Raccoon eyes. *West J Emerg Med* 2010;11:97.
- 2 Cheng FW, Ho AC, Li CK. Raccoon eyes as presentation of lymphoblastic lymphoma in a child. *Br J Haematol* 2013;162:2.
- 3 Inokuchi R, Tagami S, Maehara H. An elderly woman with bilateral raccoon eyes. *Emerg Med J* 2016;33:781.

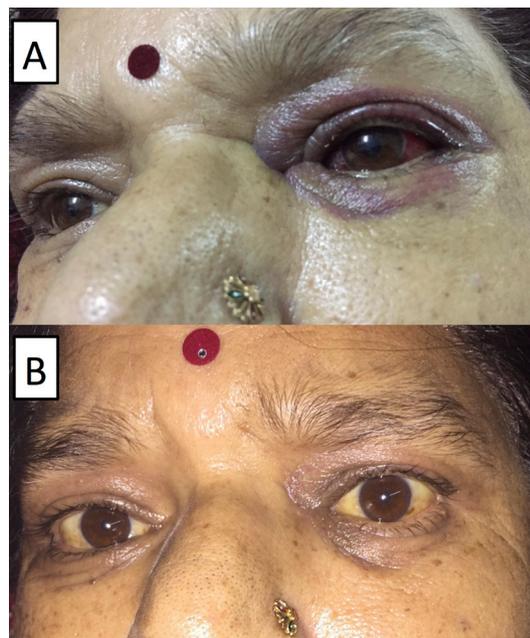


Figure 1 Clinical photograph of the patient showing periorbital ecchymosis, typical of raccoon eye and associated subconjunctival haemorrhage (A). Resolution of ecchymosis following chemotherapy (B).

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