

Curious case of raccoon eye under general anaesthesia

Sir,

Systemic amyloidosis is a rare disease that can affect any organ. Diagnosis of amyloidosis for any surgical patient should prompt a detailed systemic evaluation and need to be well prepared to manage a difficult airway. We present a case who had periorbital ecchymosis and spontaneous bleeding subsequent to anaesthesia and was diagnosed to be a case of systemic amyloidosis of AA type, postoperatively.

A 61-year-old male patient was scheduled for hernioplasty for an uncomplicated umbilical hernia. He was a known hypertensive on treatment and with minimal change kidney disease. Pre-anaesthetic evaluation a day before surgery revealed well-controlled blood pressure and multiple purpuric lesions over the neck and both hands which was diagnosed as senile purpura by dermatologists. Otherwise, the systemic examination was unremarkable, and basic blood investigations were within normal limits. In the operating room, anaesthesia was induced with fentanyl and propofol and deepened with isoflurane. After confirming adequate mask ventilation, atracurium was used for neuromuscular blockade. During this, the skin under the mask started peeling and was followed by diffuse ooze of blood from the site. Within few seconds, periorbital ecchymosis with raccoon eye like appearance was seen [Figure 1]. We decided to



Figure 1: Periorbital bleeding (raccoon eye) noted subsequent to anaesthesia

secure the airway before further intervention. When laryngoscope was introduced, there was bleeding in the oral cavity, not significant enough to obscure the laryngoscopic view. A Cormack-Lehane grade of IIb with optimal external laryngeal manipulation was noted. Endotracheal intubation was performed with 6.5 mm internal diameter cuffed endotracheal tube with the help of bougie in the second attempt and the patient was ventilated. Oropharyngeal suctioning was done for bleeding, which subsided after securing the airway. Surgery was cancelled for further evaluation. In view of the spontaneous bleeding in the periorbital area (raccoon eyes) and in the oropharyngeal cavity on minor trauma along with difficult intubation and past kidney disease, diagnosis of systemic amyloidosis was considered. Electrocardiogram and echocardiography were normal. As the patient was not willing for rectal

biopsy, skin biopsy from hand lesion was considered and obtained. This showed amorphous eosinophilic material in papillary dermis with positive Congo red staining, confirming amyloid deposit. Serum and urine electrophoresis showed no abnormal proteins. Hence, the diagnosis of AA type of systemic amyloidosis was made.

A collection of blood in the subcutaneous tissue around the eye is commonly caused by maxillofacial trauma and basal skull fracture. Rare causes include malignancies like neuroblastoma and multiple myeloma.^[1,2] Our patient developed bilateral ecchymosis spontaneously under general anaesthesia which could not be attributed to any cause mentioned earlier. We considered systemic amyloidosis as our diagnosis, as spontaneous bilateral periorbital ecchymosis is a hallmark of this disorder and this was supplemented with positive staining for amyloid. Raccoon eyes developing in perioperative period has been reported earlier in systemic amyloidosis of AL type.^[3,4] Infiltration of amyloid fibrils in the blood vessel wall causes easy bleeding.^[5] Deposits in the mesenchymal tissue of the tongue, larynx, tracheobronchial tree and lung parenchyma may present as macroglossia, odynophagia, dyspnoea, stridor, distal atelectasis and recurrent pneumonia in patients with amyloidosis, and hence, it can predispose to a difficult intubation.^[6] Skin lesions such as purpura and ecchymosis, although nonspecific, along with clinical signs of organ failure, would be a strong indication for further investigation of amyloidosis during preoperative evaluation. Similarly, the possibility of systemic amyloidosis should be considered if there is periorbital ecchymosis or spontaneous bleeding on minor trauma during the perioperative period.

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Conflicts of interest

There are no conflicts of interest.

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REFERENCES

1. Gangoo S, Mahajan A. Raccoon eyes during general anaesthesia for joint replacement. *The Internet Journal of Anesthesiology* 2008;22. Available from: <http://ispub.com/IJA/22/1/12842>. [Last accessed on 2016 May 18].
2. Leibovitch I, Selva D, Goldberg RA, Sullivan TJ, Saeed P, Davis G, *et al.* Periocular and orbital amyloidosis: Clinical characteristics, management, and outcome. *Ophthalmology* 2006;113:1657-64.
3. Weingarten TN, Hall BA, Richardson BF, Hofer RE, Sprung J. Periorbital ecchymoses during general anesthesia in a patient with primary amyloidosis: A harbinger for bleeding? *Anesth Analg* 2007;105:1561-3.
4. Kim GH, Lee WK, Na SH, Lee JS. Undiagnosed light chain systemic amyloidosis: Does it matter to anesthesiologists? A case report. *Korean J Anesthesiol* 2013;65:453-5.
5. Sucker C, Hetzel GR, Grabensee B, Stocksclaeder M, Scharf RE. Amyloidosis and bleeding: Pathophysiology, diagnosis, and therapy. *Am J Kidney Dis* 2006;47:947-55.
6. Fleming I, Dubrey S, Williams B. Amyloidosis and anaesthesia. *Contin Educ Anaesth Crit Care Pain* 2012;12:72-7.

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