Spontaneous subcutaneous orbital emphysema following forceful nose blowing: Treatment options

Dear Editor,

A 28-year-old man presented with sudden and painless onset of left periorbital swelling following forceful blowing of nose. There was no history of sinusitis, facial trauma or previous surgery. On examination there was massive non-tender left periorbital swelling with crackling sound (crepitus) on palpation suggestive of subcutaneous orbital emphysema. On lid retraction there was mild proptosis with conjunctival congestion. Ocular movements, pupillary reactions and dilated fundus examination were normal. The visual acuity was 20/20. Right eye examination was normal. The patient was kept under observation. After 48h the visual acuity in left eye dropped to 20/60 with increase in conjunctival congestion associated with disc edema and slight relative segmental pallor of disc suggestive of compressive optic neuropathy. We decided to drain the trapped subcutaneous air. Under aseptic conditions a 24-gauge needle mounted on 10 ml syringe filled with normal saline and plunger removed was introduced in the periorbital tissue. The subcutaneous emphysema was drained which was guided by air bubble eruption. After this treatment, in the next 48h there was considerable decrease in periorbital swelling, conjunctival congestion and disc edema and visual acuity improved to 20/30. After three weeks left eye returned to normal with visual acuity of 20/20.

Orbital emphysema is an uncommon condition occurring because of air trapped into loose subcutaneous tissue around the orbit commonly seen in cases with history of sinusitis, facial trauma or surgery. Lamina papyracea is the most common site of bony defect for passage of air from paranasal sinuses.[1] Orbital wall fracture is a common cause.[2] Other causes include forceful nose blowing,[1] post-surgical and pressure changes during air travel. Treatment options include observation as it is usually benign and spontaneous resolution occurs in two to three weeks.[3] However, it can cause ischemic optic neuritis[4] and central retinal artery occlusion and may lead to visual loss. Hence when orbital emphysema shows signs of pressure effect like restricted ocular motility, sluggish pupillary reaction, disc edema or decreased visual acuity then drainage of trapped air in the subcutaneous tissue should be considered.[5] It can be done effectively by simple underwater drainage of air by 24-gauge needle[2] or lateral canthotomy and cantholysis. The purpose of this article is to remind the readers about this simple and effective treatment of an uncommon condition to prevent potential visual loss.

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