VOLUME - 11, ISSUE - 02, FEBRUARY - 2022 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

Opthalmology

RARE CASE OF ORBITAL EMPHYSEMA DUE TO COMPRESSED AIR

Dr. V. Panimalar A. Veeramani	Associate Professor, Department of Ophthalmology, Saveetha Medical College, Chennai, Tamil Nadu, India.
Dr. Chiramana Supreeth Reddy*	Junior Resident ,Department of Ophthalmology, Saveetha Medical College, Chennai, Tamil Nadu, India. *Corresponding Author
Dr. Divya N	Assistant Professor, Department of Ophthalmology, Saveetha Medical College, Chennai, Tamil Nadu, India.
Dr. Bindu Bhaskaran	Senior Resident ,Department of Ophthalmology, Saveetha Medical College, Chennai, Tamil Nadu, India.

ABSTRACT Orbital or Subconjunctival emphysema usually occurs following trauma with fracture of the orbital bones. Its rare for orbital emphysema to occur without orbital bones fracture. In this case Subconjunctival emphysema without orbital wall fracture was reported following accidental injury to left eye while patient was handling a compressed air pipe .The compressed air from the pipe got pushed into subconjunctival space through a small conjunctival tear. We report this unusual case which highlights the importance of using protective eye wear in work place using compressed air.

KEYWORDS :

Case report

A 28 years-old man working in automotive industry, was handling a compressed air pipe. Accidentally the compressed air hit his left eyes when he was trying to clean the dust particles present in his hair. He developed sudden swelling, pain and protrusion of his left eyes. On examination visual acuity in right eye was normal while in left eye it was 6/9. Extraocular movements were restricted in all gaze. Subconjunctival emphysema was present 360° (figure 1).

Figure 1: Subconjunctival emphysema was present 360°

A small conjunctival tear about 2 cm in size was noted inferiorly. Crepitus was present in the lower eye lid. IOP by applanation tonometry in Right eye was 15mm of Hg whereas in Left eye it was 32 mm of Hg . Pupils were normally reacting. Fundus examination was normal. Computed tomographic scan was taken and demonstrated extensive subcutaneous , intraorbital emphysema (Figure 2) without fracture . After confirmation of absence of fracture, 26G needle was introduced into the subconcojnuctival space and globe was manipulated gently. Immediately the air escaped through the needle and subconjunctival emphysema reduced. IOP also reduced to 16mm of Hg in left eye after decompression (Figure 3). Patient was put on Oral antibiotics and anti inflammatory drugs. Topically Moxifloxacin 0.5 % eye drops was also started. On followup on 3rd day, visual acuity of left eye improved to 6/6 , subconjunctival emphysema reduced completely, only mild congestion was present (figure 4). After a week of followup, left eye was completely normal without any congestion. No other complication was noticed during next one month follow up.

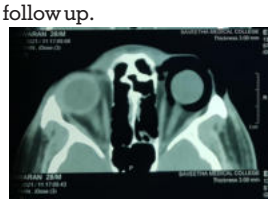

Figure 2: Intraorbital emphysema without fracture

Figure 3: Left Eye after Decompression

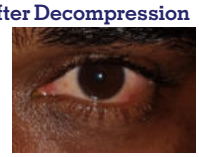

Figure 4: Mild congestion on third day post decompression - Left eye

DISCUSSION

Orbital emphysema without orbital bone fracture caused by compressed air is rare. Orbital empysema can cause a sudden increase in intraorbital pressure leading to orbital compartment syndrome (1), (3) . Untreated, it may lead to ischemia of optic nerve and retina leading to visual impairment(2). Immediate decompression of the orbital empysema becomes an emergency in such cases. A simple maneuver like introduction of 26G needle into subconjunctival space and gentle globe manipulation can prevent a complications of orbital compartment syndrome. In our case, the emphysema reduced and intraorbital pressure reduced immediately.

CONCLUSION

A simple technique like Subconjunctival needling has better prognosis and immediate relief in cases of orbital emphysema without orbital bone fracture than the conservative management. Importance of using protective eye wear during working with compressed air is again emphasized as it is rightly said "PROTECTION IS BETTER THAN CURE".

REFERENCE

1. Yuksel M, Yuksel KZ, Ozdemir G, Ugur T. Bilateral orbital emphysema and pneumocephalus as a result of accidental compressed air exposure. *Emerg Radiol.* 2007;13:195–8. [PubMed] [Google Scholar]
2. Stroh EM, Finger PT. Traumatic transconjunctival orbital emphysema. *Br J Ophthalmol.* 1990;74:380–1. [PMC free article] [PubMed] [Google Scholar]
3. Walsh MA. Orbito palpebral emphysema and traumatic uveitis from compressed air. *Arch Ophthalmol.* 1972;87:228–9. [PubMed] [Google Scholar