



When Air is the Complication: Emphysema Following Tracheostomy

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Dear Editor,

I read with great interest a case report entitled: 'Cervical aerocele: a rare delayed complication of tracheostomy' published in the November 2018 issue of the *Oman Medical Journal*.¹ It is such a rare complication to occur following a common symptom, which was prolonged cough.

We experienced a similar case with air trapped below the skin following the routinely performed procedure. The similarities between our case and the reported case were as follows: the procedure which the patient underwent, the causative symptom that lead to it, and the cough. The differences were the duration of the symptom and the site where the air was trapped.

In the reported case, chronic cough occurred eight years after the procedure had led to the collection of air under the skin.¹ This was possible as the slowly fibrosed tracheocutaneous tract will be prevented from complete closure following chronic cough that weakened the anterior tracheal wall. Eventually, the chronicity of the symptom tends to make the air-containing space developed, persistent, and enlarged with time. However, the patient refused further intervention.

In our case, the patient had a cough, most likely due to the local irritation of the tube to the tracheal wall itself. The cough was violent, and that made the air leak from the stoma on the anterior tracheal wall to the external. It is not rare to have the patient coughing initially post-procedure, but a peristomal leak plus a tight skin closure can aggravate the collection of air subcutaneously, and in its severe form can go all around the neck structures.

In our case, a lateral neck radiograph confirmed the presence of air trapping not only on the anterior neck compartment but also extended to the posterior part of the pharynx. As our patient already had a tracheostomy, conservative management was commenced. The skin suture was loosened a bit, and the cough was also treated.

In most cases of subcutaneous emphysema, even though it is rare, for example post-tonsillectomy, the condition usually resolves with conservative management.²⁻⁴ However, in cases of subcutaneous emphysema that develop without an airway tube, intubation can be attempted or tracheostomy can be an option. Multiple skin puncture and incisions can be performed in milder cases.⁴

In conclusion, a simple routine procedure like tracheostomy can lead to unexpected complications, though these are rare. Treating the underlying aggravating factor is the solution as the majority of cases will resolve spontaneously.

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