

Clinical image

Pneumomediastinum and Subcutaneous Emphysema After Tracheotomy Tube Decannulation



Neumomediastino y enfisema subcutáneo tras decanulación de una traqueostomía

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A 42 years old man was admitted to stomatology hospital on August 2019 due to relapse of gingival cancer (GC). As treatment procedures, patient received surgery and tracheostomy at the same time. After surgery, patient's condition was stabilized, incision of the neck appeared to be in the first stage of wound healing process and decannulation was done. On the night before discharge, patient appeared to be suffered from sudden dyspnea, unconsciousness and seizures, so emergency tracheostomy was performed, and patient was immediately transferred to Intensive Care Unit (ICU). In the process, patient suffered from transient hypotension, and ventilation via the stoma was administered. Patient didn't receive Ambu mask during reanimation. On admission, patient's PO₂ level was 100 mmHg, patient had undergone CT scan and result shows that present of pneumomediastinum accompanied with subcutaneous emphysema (Figs. 1 and 2), and pulmonary embolism was excluded. Pneumomediastinum following tracheostomy is a rare occurrence, which has a percentage of 0.36 of incidence reported.¹ Reviewing back his medical history, patient did complaint of chest distension 2 days ago before the onset of this scenario, and when emergency tracheostomy was performed, a lot of bubbles were seen. Therefore, we believe that there is a possibility that maybe after decannulation, pneumomediastinum was slowly formed which is very rare in the absence of positive airway pressure, and gradually compresses the heart, leading to

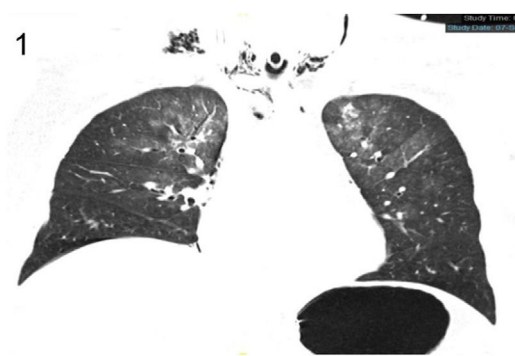


Fig. 1. Coronal computed tomography (CT) image shows the subcutaneous emphysema of the upper and lower fossa of bilateral clavicle.

obstructive shock, thus, when tracheostomy was performed again, patient's condition returned stabilized. CT reveals that pneumomediastinum compress the heart and lead to formation of Earth-Heart sign (Fig. 3).² Patient return consciousness on the second day, he did a follow-up on CT scan after 5 days and result shows that pneumomediastinum and subcutaneous emphysema were completely absorbed.

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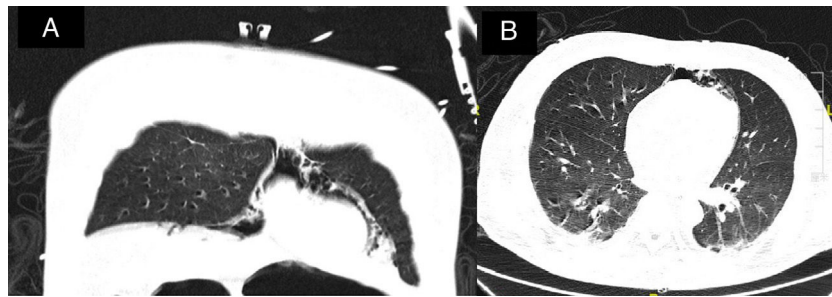


Fig. 2. Coronal (A) and axial (B) CT images showing pneumomediastinum.

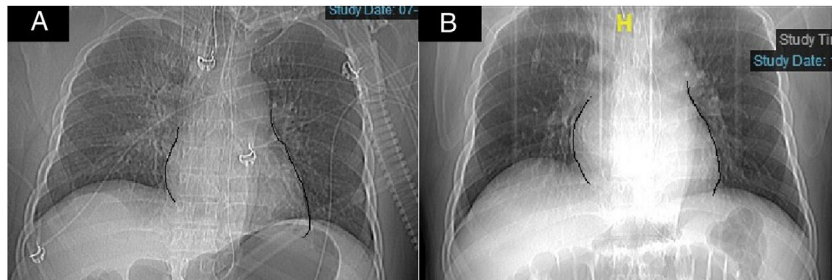


Fig. 3. Posteroanterior CT images showing (A) the Earth-Heart sign: the cardiac silhouette appears to be flattened which is similar to an oblate sphere; and (B) normal cardiac silhouette on 5th day after re-tracheal incision.

References

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