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Images

Fish bone associated pneumomediastinum in a 15-year-old adolescent male

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A 15-year-old boy who had been experiencing chest tightness and odynophagia for 6 h came to the emergency department. He swallowed a salmon bone 12 h earlier. The vital signs at triage did not indicate tachypnea or desaturation. The patient appeared well on physical examination. He had a patent oropharynx and crepitus felt over his right supraclavicular area. His respiratory pattern was smooth, and his breath sounds were symmetric and clear bilaterally. A chest radiograph revealed lucent streaks of gas outlining mediastinal structures with an extension of subcutaneous emphysema and pneumopericardium (Fig. 1a). Computed tomography revealed air in the mediastinum, pericardial cavity, and subcutaneous emphysema (Fig. 2).

The patient was admitted and received conservative treatment, including oxygen therapy and empirical antibiotics. Further examination included laryngomicrosurgery and esophagoscopy, which revealed no foreign body or esophageal injury. Follow-up radiography (Fig. 1b) revealed resolving of the emphysema, pneumomediastinum, and pneumopericardium; meanwhile, his symptoms resolved. The patient was discharged on Day 5 of hospitalization and had an uneventful outpatient department follow-up.

Pneumomediastinum is characterized by free air or gas in the mediastinum, which can be accompanied by subcutaneous emphysema, pneumothorax, and pneumopericardium. It is a rare entity in pediatric patients, mainly resulting from asthma exacerbations and respiratory infections.[1] Other causes include Valsalva maneuvers, foreign body aspiration, trauma, esophageal rupture, diabetic ketoacidosis, or idiopathic conditions.[2,3] Management of pneumomediastinum depends on the etiology. Conservative treatment for nontraumatic patients is often adequate since the clinical course is self-limiting.[2,3]

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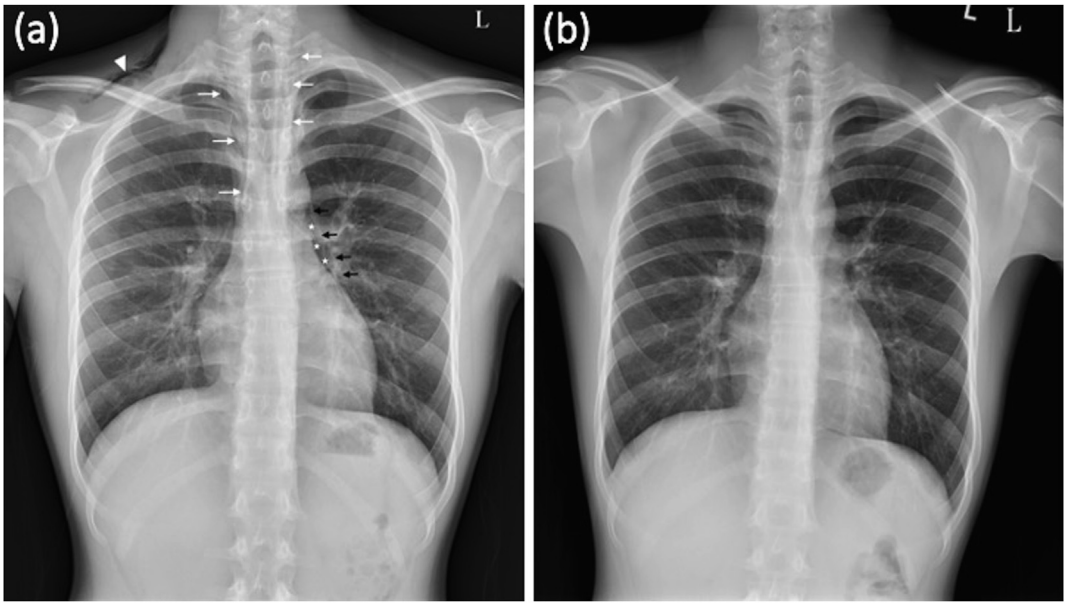

Figure 1 (a) Posteroanterior chest radiograph showing subcutaneous emphysema (white arrowhead) and pneumomediastinum (white arrows). The left heart border was partially surrounded by air (white stars) below the aortic knob, with the pericardium (black arrows) sharply outlined by air, indicating pneumopericardium.(b) Chest radiography on Day 5 of hospitalization illustrated neither subcutaneous emphysema, pneumomediastinum, nor pneumopericardium.

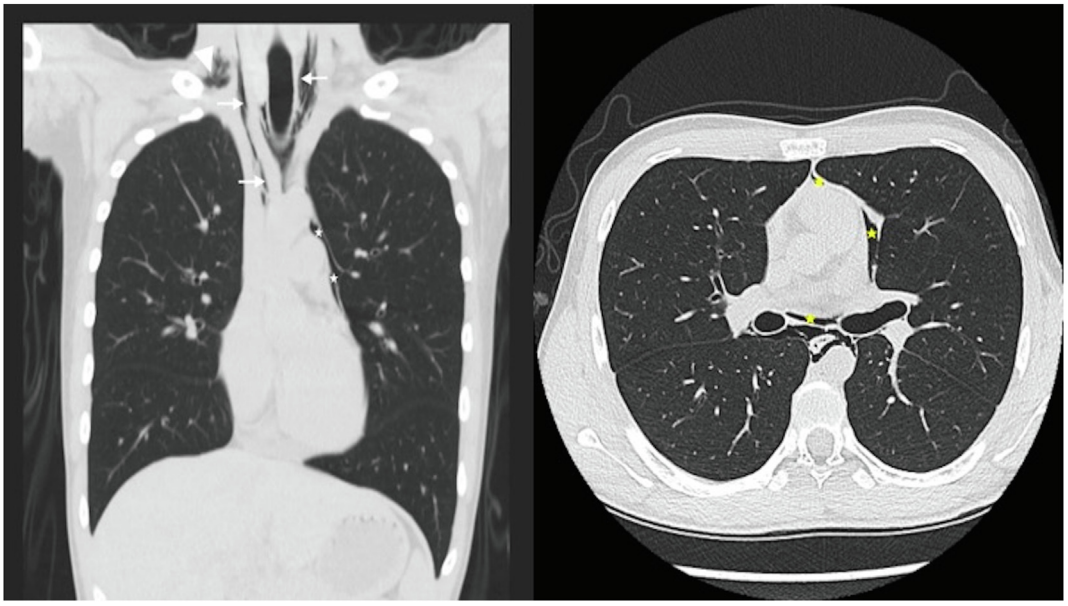

Figure 2 Coronal and axial high-resolution computed tomography demonstrated subcutaneous emphysema in the carotid space of the neck (white arrowhead), air accumulation in the mediastinum (white arrows), the superior pericardial cavity (white stars), and the surface of the heart (yellowish stars).

However, for pneumomediastinum secondary to esophageal rupture (<4% of patients have rupture following fish bone ingestion), or patients complicated with tension pneumomediastinum, invasive, or surgical treatments might be required.[2,3]

Declaration of competing interest

None.

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