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Subcutaneous cervical emphysema after self-induced vomiting

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Subcutaneous cervical emphysema, an uncommon condition, has a diverse aetiology and is usually self-limiting. Sometimes it follows a trivial injury unnoticed by the patient or results from alveolar rupture. We report an unusual case.

CASE HISTORY

A 19-year-old woman came to the accident and emergency department with neck swelling and discomfort. This, she reported, had developed shortly after she had induced vomiting by pushing two fingers into her mouth; she was trying to deal with a foreign body sensation in her throat after eating a meal of chicken, and the manoeuvre was successful. On examination she had obvious subcutaneous cervical emphysema extending to her upper anterior chest wall; she was apyrexial, there were no signs of respiratory distress or stridor, and her cardiovascular system was normal. On flexible endoscopic examination no intralaryngeal injury could be seen. A chest X-ray on admission showed air in the subcutaneous tissues of the upper anterior chest wall but no evidence of pneumomediastinum or pneumothorax. The lateral soft tissue X-ray of her neck revealed air in the subcutaneous tissues (Figure 1). She was admitted for observation, bed rest and prophylactic antibiotics. Pending radiological investigation she was fed by nasogastric tube. Her condition improved gradually without complication and a water-soluble contrast study performed at 3 days did not show any evidence of a perforation. She was discharged home after 4 days when seen to tolerate oral feeding.

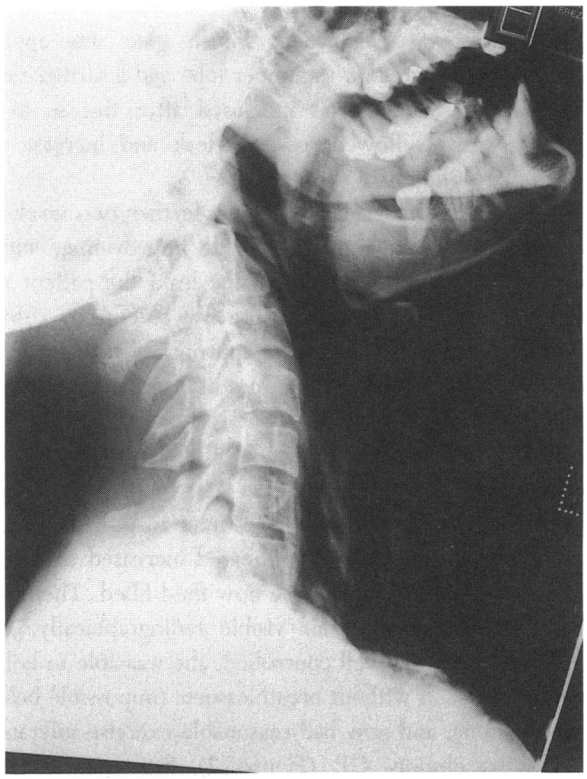

Figure 1 **X-ray of neck on admission**

COMMENT

Air can enter the subcutaneous cervical tissues after surgery, endoscopy or mechanical ventilation. Blunt or penetrating trauma to the neck and foreign body perforation of the mouth, pharynx, larynx or trachea[2–4] have also been implicated. Those cases presenting as spontaneous cervical and mediastinal emphysema[5] are thought to be due to alveolar rupture: air in the intra-alveolar spaces tracks along the pulmonary vasculature into the mediastinum and thence into the tissue planes of the neck. Thus, any increase in

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intra-alveolar pressure (for example, in cough, asthma or strenuous effort[6,7]) may be a cause of subcutaneous emphysema. However, in the case reported here there was no radiological evidence of mediastinal emphysema; nor were there any symptoms related to the chest. The subcutaneous emphysema was limited to the soft tissues of the neck and anterior chest wall. Cervical emphysema usually follows a benign self-limiting course but has potential for serious complications. It may cause pneumopericardium[8], cardiac failure (by interfering with the pulmonary circulation), hypotension and difficulty in respiration ('airblock'[5]). Similarly, air in the hypopharyngeal region can progressively narrow the airway and cause acute obstruction[9]. Diagnosis is made from the history, the presence of crepitus and radiographic evidence of air in the tissue planes. The treatment of subcutaneous emphysema is conservative. The patient should be admitted and given nothing by mouth until a perforation can be excluded. When there is believed to be potential for infection, antibiotics should be administered[10]. The subcutaneous emphysema is usually self-limiting. Tracheostomy will be necessary only in cases of progressive airway obstruction unresponsive to conservative treatment[11].

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Bone marrow involvement in breast cancer detected by positron emission tomography

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Positron emission tomography (PET) with ^{18}F-fluorodeoxyglucose (FDG) has proved valuable in the detection and staging of malignancies and in assessment of response to treatment[1–4]. Little has been published on the application of this technique to detection of bone marrow metastases.

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CASE HISTORY

A woman aged 47 was referred in November 1996 with a lump in the upper medial quadrant of her left breast which on wide local excision and level 2 axillary dissection proved to be a 4.5 cm, grade 3, node-negative ductal carcinoma. Staging investigations, including chest X-ray, isotope bone scan and liver ultrasound yielded no evidence of secondary spread. The patient completed adjuvant chemotherapy with 5-fluorouracil, epirubicin, cisplatin and subsequent breast radiotherapy in June 1997. She returned in November 1997 with a nodule in the medial aspect of the lumpectomy scar which cytological examination showed to be malignant. When an isotope bone scan and computed tomographic (CT) scans showed no abnormalities she underwent a mastectomy and level 3 axillary clearance with removal of a 1 cm grade 3 ductal carcinoma; 4 of 23 axillary nodes showed metastases. In January 1998 the patient reported nagging discomfort in both knees and was noted to have a microcytic, hypochromic anaemia (Hb 9.1 g/dL, MCV 72.9 fL) and thrombocytopenia (platelets 95×10^9/L). On bone scanning there was patchy uptake of isotope in the skull vault and high activity in both lower femoral