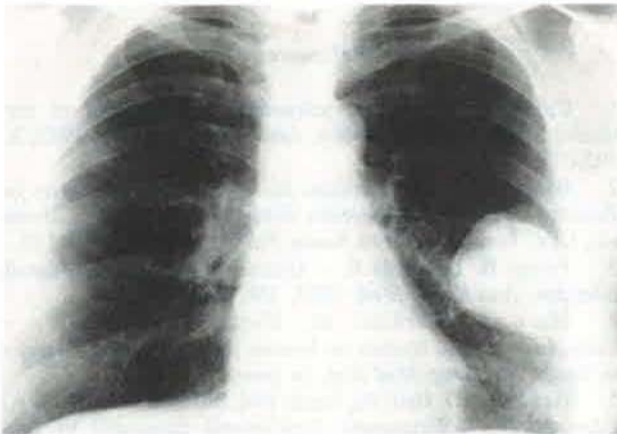


Calcified pulmonary tumour with dyspnoea

B. El Nakadi, P. de Francquen

A



B

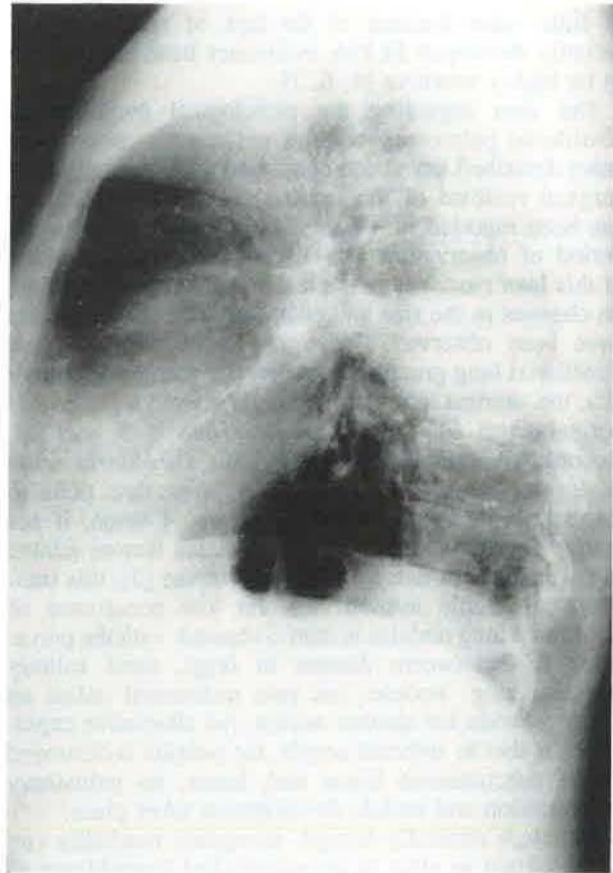


Fig. 1A and B. — Posteroanterior and lateral chest X-Ray film demonstrating a large left lower lobe calcified mass associated with pleural calcification.

A 67 yr old woman was admitted with chronic dyspnoea increasing over the last six months. The patient's history revealed a left thoracic trauma 49 yrs previously.

Physical examination revealed cyanosis and clubbing. Haematocrit was 58% and haemoglobin 188 g·l⁻¹. Arterial oxygen tension was 7 kPa. The chest roentgenogram

showed a 7 cm tumour with a calcified edge, situated in the left lower lobe and associated with pleural calcification (fig. 1 A and B). The right-to-left shunt evaluated by radionuclide scintigram was 23-26%.

Keywords: Acquired form; calcification; pulmonary arteriovenous fistula.

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Turn page for diagnosis

Diagnosis

A calcified pulmonary arteriovenous fistula was diagnosed. A pulmonary arteriovenous fistula (PAVF) was confirmed by angiogram (fig. 2).

Treatment

A left thoracotomy was performed. The lesion was dissected free from the surrounding pulmonary parenchyma. The vessels were ligated individually at their origin. Under the same ventilatory conditions (inspiratory oxygen concentration of 50%) arterial oxygen tension (P_{aO_2}) increased from 12.5 to 32 kPa. Pathological examination confirmed the PAVF calcification. After surgery, P_{aO_2} was stabilized over 10 kPa on room air.

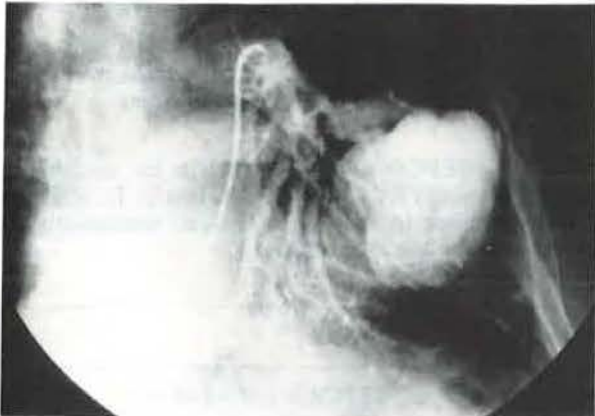


Fig. 2. - Angiogram confirming the diagnosis of pulmonary arteriovenous fistula (PAVF).

Discussion

PAVF is an uncommon but well documented abnormality. Most cases are congenital. Acquired forms, although very rare, are reported after surgery, trauma, actinomycosis, cirrhosis, schistosomiasis and metastatic carcinoma [1]. In the present case, the association of pleural calcification with the vascular lesion is suggestive of an acquired PAVF, probably due to the thoracic trauma mentioned in the patient's history. To the best of our knowledge, no case of PAVF from blunt trauma is reported in the literature, despite the possible pulmonary laceration by fractured ribs.

Ninety eight percent of patients with PAVF have abnormal chest roentgenogram [2]. Lesions are seen in the lower lobe in 55–84% of cases, and are single in two thirds of them [1–4]. They are typically well circumscribed and non-calcified nodules [2–6]. Despite the multiple

studies reporting the radiological findings [2–6], calcification of these lesions is mentioned only by PRAGER *et al.* [1]. They stated that it occurs in less than 5% of cases, and explained this by the occasional calcification of varicose and degenerative draining veins. Atherosclerosis of the pulmonary artery develops exclusively in the case of pulmonary hypertension. The atheromas disseminated along the vessel are exceptionally calcified [7]. In the present case calcification is due to the phlebosclerosis which is consecutive to a high venous pressure. Such a condition is reported by ORCEL and CHOMETTE [8] in cardiac failure, pulmonary hypertension and arteriovenous fistula.

We are unable to definitely relate the lesion's calcification to its possible traumatic aetiology, since no calcification is described in the few case reports of traumatic PAVF [9–12].

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RÉSUMÉ: La calcification d'une fistule artério-veineuse pulmonaire n'apparaît que dans moins de 5% des cas de cette affection rare. Présentation d'une observation où l'association d'une calcification pleurale à la lésion vasculaire a suggéré une forme acquise de fistule artério-veineuse pulmonaire. L'étiologie et les observations radiographiques sont discutées. *Eur Respir J.*, 1990, 3, 1072–1073.