References

1. Sigh, S., Sharma, B.K., Wahi, P.L., Anand, B.S. & Chugh, K.S. Spectrum of acute poisoning in adults (10 years experience). *J Assoc Physicians India* 1984, **32**: 561–563.
2. Kipling, R.M. & Cruickshank, A.N. Organophosphate insecticide poisoning. *Anaesthesia* 1985, **40**: 281–284.

Subacute cor pulmonale due to tumour embolization to the lungs

Sir,

Although metastatic spread of tumour to the lungs is common, subsequent production of cor pulmonale is not. Since the first description of subacute cor pulmonale caused by multiple tumour emboli to the lungs in 1937, no more than 40 cases have been reported, five of which were related to breast neoplasms.¹ The purpose of this letter is to report a new case. We emphasize the value of the pulmonary microvascular cytology study in the diagnosis of this entity.

A 39 year old woman was admitted with a one week history of rapidly progressive breathlessness. Twelve months before admission, a left modified radical mastectomy was performed for infiltrating ductal carcinoma. Chemotherapy with cyclophosphamide, methotrexate and fluorouracil was administered for the next 6 months. Physical examination disclosed a respiratory rate of 30/min at rest and one node on the left side of her neck. Initial arterial blood gases were: P_{aCO_2} 3.7 kPa, P_{aO_2} 6.9 kPa and pH 7.5. Her chest radiograph was normal. A perfusion lung scan demonstrated no abnormalities. Swan-Ganz catheterization revealed the following pressures (mmHg): right atrial, 15; right ventricular, 65/12; pulmonary artery, 60/45; and pulmonary capillary wedge, 4. Cytological examination of blood obtained via floating pulmonary artery catheter in the wedged position² revealed both malignant cells and megakaryocytes. Cervical lymph node biopsy specimen contained tumour. Despite maximum supportive measures and chemotherapy with doxorubicin and cyclophosphamide, she died on the fourth hospital day. Autopsy was denied.

Subacute cor pulmonale is a distinct disease entity but is often misdiagnosed. Although the diagnosis in our patient was supported on the basis of both Swan-Ganz catheterization and pathological lymph node findings, it was confirmed after pulmonary microvascular cytology examination.

The diagnosis of lymphangitic spread of carcinoma in the lungs is sometimes difficult. In a recent study,³ malignant cells were found on pulmonary microvascular cytology samples in seven of eight patients studied in whom lung biopsy or autopsy demonstrated that lymphangitic carcinomatosis was the primary cause of their respiratory distress. In 17 patients with active cancer but who had no evidence of pulmonary metastasis, in all of these patients except one, pulmonary microvascular cytology showed megakaryocytes and no other abnormalities.

As Masson *et al.* conclude,³ this technique may be valuable when lung biopsy is refused or is thought to be hazardous.

Jose Luis Rodriguez-Garcia

Juan Carlos Hernando

Manuel Serrano

Miguel Angel Aguinaga¹

Luis Escribano²

Services of Medicine,¹ Intensive Care and ²Haematology,

*Hospital Ramón y Cajal,
Carretera de Colmenar km 9,100,
28034 Madrid, Spain.*

References

1. Xian-wu, He, Yi-hai, Tang, Zhong-qiang, Luo, Liang-di, Gong, Tsung, O, Cheng. Subacute cor pulmonale due to tumor embolization to the lungs. *Angiology*, 1989, **40**: 11–17.
2. Masson, R.G. & Ruggieri, J. Pulmonary microvascular cytology. A new diagnostic application of the pulmonary artery catheter. *Chest* 1985, **88**: 908–914.
3. Masson, R.G., Krikorian, J., Lukl, P., Evans, G.L. & McGrath, J. Pulmonary microvascular cytology in the diagnosis of lymphangitic carcinomatosis. *N Engl J Med* 1989, **321**: 71–73.