Splenic haematoma complicating pleural biopsy

Sir,

Pleural biopsy using an Abram needle is a well established method of achieving histological diagnosis in a variety of pleural disorders. Although complications are rare and usually mild, more serious complications may occur. We report a patient in whom elective left pleural biopsy and aspiration for a persistent left pleural effusion was complicated by massive peri-splenic haematoma followed by splenic vein occlusion and ascites. This resolved with the formation of collateral veins.

A 68-year-old insulin-treated diabetic with a history of hypertension, idiopathic thrombocytopenia and end-stage renal failure underwent investigation for a persistent left pleural effusion. He had been a smoker and there was a history of asbestos exposure. A chest X-ray in February 1993 showed left pleural effusion with some focal consolidation and pleural thickening. Computed tomography (CT) confirmed left lower lobe collapse with effusion.

Pleural aspiration revealed a few leucocytes but no organisms. Fluid analysis: protein 37 g/l, albumin 19 g/l, amylase 12 Somogyi units, adenosine deaminase 35 U/l, lactate dehydrogenase 296 U/l. Sputum culture, cytology and Gram stain were negative. Bronchoscopy was normal. He underwent pleural biopsy which showed chronic inflammation with suspicious mesothelial cells.

A second pleural biopsy again showed non-specific inflammatory changes only. Three days after the second biopsy, 24-hours post-haemodialysis, he developed severe left upper quadrant pain and shock. There was a tender mass in the left upper quadrant. Haemoglobin was 3.9 g/dl, platelets $119 \times 10^9/l$, normal coagulation profile.

CT scan showed a 14×11 cm heterogeneous mass infero-lateral to the spleen (figure 1). He was managed conservatively and discharged home after two weeks but two months later was readmitted with abdominal pain and distension. Clinically he had splenomegaly with marked ascites confirmed by ultrasound. The ascitic fluid was straw-coloured with a protein of 27 g/l, albumin 13 g/l, negative on culture and negative cytology. Microscopy showed red cells and polymorphs only.

Repeat CT suggested the possibility of occlusion of the splenic vein by thrombus. He improved on regular paracentesis and propranolol. Magnetic resonance imaging (MRI) angiography showed collateral vessel formation around the pancreas with no visible splenic vein blood flow (figure 2).

Figure 1 CT scan showing organised splenic haematoma

Figure 2 MRI angiography showing multiple collateral vessels with absent splenic vein blood flow

At present he remains well with resolution of the ascites, but persistence of the left pleural effusion.

Percutaneous needle biopsy of the pleura is a relatively safe procedure. However, one should be alert to the possibility of unusual and potentially more serious complications, including mediastinal and sub-cutaneous emphysema, pneumothorax,¹⁻³ seeding of tumour along the biopsy needle tract,⁴ haematoma and abscess formation.^{2,5} Perisplenic haematoma and splenic vein thrombosis has not been previously reported and may have been avoided if the biopsy had been performed under ultrasound control.

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Cardiac tamponade as the initial presentation of malignancy: is it as rare as previously supposed?

Sir,

I wish to reinforce the message implied in the title of the paper by Muir and Rodger.¹ Cardiac tamponade presenting as the initial manifestation of malignancy is not as uncommon as previously supposed, and in fact I reported three such cases in 1991.²

Another useful clinical clue is the presence of atrial fibrillation, especially if it is paroxysmal in nature. I have personally encountered five cases of cardiac tamponade and paroxysmal atrial fibrillation as the initial presentation of metastatic malignant pericardial effusion.

The most important clue to the malignant aetiology of the cardiac tamponade is the haemorrhagic nature of the pericardial fluid recovered on pericardiocentesis, which was present in all the cases reported by Muir and Rodger.¹ Barring a traumatic tap, haemorrhagic pericardial effusion is almost pathognomonic of malignancy.²

Thus one should always keep in mind the possibility of a malignancy when a patient presents with cardiac tamponade, especially when associated with paroxysmal atrial fibrillation. Once the haemorrhagic nature of the pericardial effusion is recognised, a diligent search should be made for the primary site of the malignancy – usually the lung – and treatment directed accordingly.

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1 Muir KW, Rodger JC. Cardiac tamponade as the initial presentation of malignancy: is it as rare as previously supposed? *Postgrad Med J* 1994; 70: 703–7.

2 Cheng TO. Cardiac tamponade as a presentation of malignancy. *Am J Emerg Med* 1991; 9: 296.

Complications of closed pleural biopsy

- mediastinal and/or subcutaneous emphysema
- pneumothorax
- seeding of tumour along the biopsy needle tract
- haematoma formation
- abscess formation
- haemorrhage into chest wall and pleural cavity
- trauma to intercostal nerves
- keloid formation

- 1 Mungall IPF, Cowen PN, Cooke NT, Roach TC, Cooke NT. Multiple pleural biopsies with the Abram needle. *Thorax* 1980; 35: 600–2.
- 2 Scerbo J, Keltz HD, Stone DJ. A prospective study of closed pleural biopsies. *JAMA* 1971; 218: 377–80.
- 3 Mestitz P, Purves MJ, Pollard AC. Pleural biopsy in the diagnosis of pleural effusions. A report of 200 cases. *Lancet* 1958; 2: 1349–53.
- 4 Schachter EN, Basta W. Sub-cutaneous metastases of adenocarcinoma following percutaneous pleural biopsy. *Am Rev Respir Dis* 1978; 107: 283.
- 5 Reinhold C, Illescas FF, Atri M, Bret PM. Treatment of pleural effusions and pneumothorax with catheters placed percutaneously under image guidance. *AJR* 1989; 152: 1189–91.