Mucous metaplasia of the pleura

M S Bashir, P N Cowen

Abstract
A case of mucous metaplasia of mesothelium in an 80 year old woman is described. Its cause is unknown, but it is important not to confuse it with secondary tumour.

Case report
An 80 year old woman presented with upper abdominal pain and weight loss. A right sided pleural effusion was found on examination but no abdominal signs were detected clinically or on ultrasound scan. She had never complained of respiratory symptoms, and a chest x-ray picture after pleurocentesis, when pleural biopsy was performed, was normal. There was nothing to suggest new growth in this patient and she died about a week later. Necropsy was not performed and cause of death was given as cardiorespiratory failure.

Pleural histology
This showed inflamed vascular connective
tissue lined by a strip of mesothelial cells which had become detached in parts. Some of these were apparently normal mesothelial cells but were continuous with columnar cells containing basal nuclei with apical vacuoles which were periodic acid Schiff positive. A representative example of this is shown in the figure. All of the mucin containing cells were well differentiated and showed no evidence of a possible malignant origin. They did not stain for carcinoembryonic antigen by immunoperoxidase.

Discussion
The histology of the pleura indicated mucous metaplasia, described by Dunnill as occurring in older patients with fibrocystic disease of the pancreas. He described the condition at necropsy in a 17 year old female. A possible pathogenesis in this case was ectopia of bronchial epithelium following rupture of a bronchiectatic abscess.

Spencer describes a case of vacuolation of mesothelial cells ascribed to intra- and intercellular oedema because staining for mucin was negative. In the case described there was a clear transition from mesothelium to columnar cells in an elderly patient who had no evidence of fibrocystic disease of the pancreas. The cells rested on a basement membrane and the vacuoles were periodic acid Schiff positive, thus indicating mucous metaplastic transformation of the pleura. The exact cause of this change is not known but its recognition is important to avoid it being misinterpreted as malignant tissue. This would be quite likely if the metaplastic change occurred in an area of proliferating reactive mesothelium. The morphology and negative staining for carcinoembryonic antigen are helpful in confirming the benign nature of this appearance.