Bronchorrhea in Bronchioloalveolar Carcinoma

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A 79-year-old woman, non-smoker, came to the hospital because of weight loss (8 kg within the previous 2 months) and productive cough. Her previous medical history was irrelevant. The patient daily expectorated a large amount of frothy sputum; almost 2 cups of 100 ml each (fig. 1). Auscultation of her chest revealed fine inspiratory crackles bilaterally, whereas arterial blood gas

measurement showed mild hypoxemia ($pO_2 = 65$ mm Hg). Radiographic examination by chest X-ray (fig. 2) and a subsequent computed tomography scan of the chest demonstrated bilateral air space and nodular opacities on all lung fields without lymphadenopathy. Transbronchial lung biopsy confirmed the diagnosis of bronchioloalveolar carcinoma (fig. 3).

Fig. 1. Frothy sputum expectorated by the patient and collected in a cup of 100 ml.

Fig. 2. Radiographic examination by chest X-ray.

Fig. 3. Transbronchial lung biopsy (hematoxylin and eosin $\times 100$).

Bronchioloalveolar carcinoma is a subtype of pulmonary adenocarcinoma, developing from terminal bronchiolar or acinar epithelia and progressing along the lining of alveolar walls (a pattern referred to as ‘lepidic growth’) and/or by aerogenous spread, but without

evidence of stromal, vascular or pleural invasion. Figure 3 shows cuboidal- and columnar-shaped neoplastic cells growing on intact alveolar walls in a lepidic fashion.

The term ‘bronchorrhea’ refers to the quantity of the sputum production, defined as >100 ml daily. Bronchorrhea along with the frothy appearance of the sputum, which indicates an origin from the distal airways, although not always present, is a unique feature of the disease [1–3].

References

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