Psammoma Bodies in Lung Cancer

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A 72 year-old-woman was admitted with an abnormal shadow in the right lung (Fig. 1). Bronchofiberscopy showed narrowing of the right middle lobe bronchus, where brushing cytology yielded adenocarcinoma cells. She was treated with carboplatin and paclitaxel with minimum effect. Then she was started on gefitinib but this had to be discontinued because of the development of interstitial pneumonia. There was some clearing of the pneumonia by treatment with prednisolone. The tumor shadow, however, gradually increased with signs of lymphangitis carcinomatosa in both lungs. A computed tomography scan of the chest demonstrated scattered punctate calcifications within the mass lesion extending from the right hilum to the middle and lower lobes (Fig. 2). The patient died of respiratory failure 10 months after onset. At autopsy, the lungs weighed 1,435 g and the cut surfaces of both lungs exhibited diffuse grayish-white discoloration. Histologically, the tumor was diagnosed as poorly differentiated adenosquamous carcinoma with extensive intrapulmonary and lymphangitis metastases. Unexpectedly, there were many psammoma bodies of various sizes within the cancer cell nests and papillary processes of the primary tumor (Fig. 3) and in the nodal metastatic foci. The psammoma bodies were laminated and contained mucopolysaccharides, iron, and calcium, as detected by histochemical staining. Psammoma bodies are spheroidal concretions that are known to occur in a variety of malignant and benign conditions, particularly of the thyroid, female pelvic organs, and

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Figure 3. Section of the lung showing a nest of carcinoma cells and multiple psammoma bodies with concentric laminations (HE stain).

brain. They are believed to arise from degenerating or dead epithelial tumor cells, secretions from these cells, or a composite of both. It should be noted that psammoma bodies may be rarely seen in certain cases of lung cancer (1, 2).

References


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