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CYTOLOGICAL APPEARANCE OF PAPILLARY MUCOUS GLAND ADENOMA OF THE LEFT LOBAR BRONCHUS WITH HISTOLOGICAL CONFIRMATION

Dear Editor

Mucous gland adenoma of the bronchial tree is a very rare benign neoplasm of the lung. It presents as an endobronchial central nodule, characterized by a proliferation of cysts, tubules, glands and papillary formations, lined by tall columnar mucous-secreting cells.

We describe the cytological features of a papillary mucous gland adenoma of the left bronchus in brushing cytology, with histological and ultrastructural correlations.

Figure 1. Bronchial brushing cytology: many papillary clusters, variable in size. Note the presence of a psammoma body (arrows) (PAP, × 200).
A 52-year-old man, suffering from recurrent bronchitis was referred to our hospital complaining of cough and haemoptysis. On chest X-ray, a coin lesion was seen in the upper lobe of the left lung. At bronchoscopy, in the apico-dorsal segment of the upper left lobe bronchus a reddish cauliflower-like mass was brushed and biopsied. After a total body scintiscan, which gave negative results, the patient underwent a left upper lobectomy with regional lymphadenectomy.

The patient is alive and well 6 years after the lung resection.

Smears from the bronchial brushing were very cellular with many papillary clusters, variable in size (Figure 1), in a mucoid and haemorrhagic background with interspersed columnar cells. The papillae were without any vascular core and showed smooth edges with enclosed lamellated concentric calcified formations, i.e. psammoma bodies (Figure 1, arrows).

At higher magnification, the papillary structures were lined by monomorphic cuboidal-to-columnar cells, showing a normal nuclear/cytoplasmic ratio and nuclear polarity, with no cilia. The epithelial cells were crowded and showed abundant, vacuolated, mucin-rich cytoplasm and central-to-parabasal, oval-to-round nuclei with a thin nuclear membrane, unevenly distributed chromatin and inconspicuous nucleoli (Figure 2). No necrosis or nuclear pleomorphism were seen.

Bronchial biopsy showed a papillary proliferation, characterized by hyaline fibrovascular stalks, enclosing psammoma bodies (Figure 3, arrows), covered by a monolayered columnar surface epithelium (Figure 3), with eccentrically located nuclei and abundant vacuolated mucin-rich cytoplasms (Figure 4).
In the subsequent lobectomy specimen, an endobronchial reddish soft mass, 1.5 cm in diameter was found, obstructing the upper segmentary bronchus, located 1 cm from the bronchial surgical resection margin. A subpleural area of lung consolidation was present. Histology showed a papillary glandular tumour similar to the biopsy findings. A diagnosis of bronchial adenoma was made.

The ultrastructural features were consistent with a well differentiated mucin-secreting epithelial cell proliferation.

Benign pulmonary tumours are extremely rare, accounting for only 0.3% of all lung tumours. In a review of 130 benign neoplasms of the lung, only one mucous gland adenoma (0.8%) was reported by the staff of the Mayo Clinic. Many terms have been applied to mucous gland adenoma of the bronchus (MGAB), including bronchial cystadenoma, mucous cell adenoma, polyadenoma, and bronchial adenoma arising in mucous glands.

In the recent AFIP series and in Spencer’s report, mucous gland adenoma has been included in the salivary gland type tumours, as well as mucoepidermoid, acinic and adenoid cystic carcinomas.

In the WHO classification, benign epithelial lung tumours encompass papillomas (squamous, glandular and mixed) and adenomas. Included in the latter group are: alveolar adenomas (peripheral solitary tumours, lined by type II pneumocytes), papillary adenomas (peripheral parenchymal tumours, formed by Clara cells and type II pneumocytes), mucinous cystadenomas (a localized cystic parenchymal mass, filled with mucin and lined by well-differentiated, columnar mucinous epithelium) and adenomas of salivary-gland type (pleomorphic adenoma, monomorphic adenoma, myoepithelioma and mucous gland adenoma).

Well differentiated mucoepidermoid carcinoma, which can be largely glandular, may have dilated cysts and shows endobronchial papillary growth, with psammoma bodies, represents the most difficult differential diagnosis. The finding of glycogen-rich intermediate cells with squamous differentiation, even in small numbers, especially in the low-grade form, suggests mucoepidermoid tumour.

The uniqueness of our case consists in the cytological findings, not previously described, in which papillary structures, with psammoma bodies, were lined by mucinous columnar cells, showing benign features. The central location of the MGAB allows the distinction from peripheral benign tumours such as mucous cystadenomas and bronchioalveolar adenomas. MGAB, with absence of cytological atypia or necrosis, should not be misinterpreted as a papillary carcinoid, papillary mucoepidermoid carcinoma or papillary (bronchioalveolar) adenocarcinoma, all of which behave as malignant tumours.

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PREMATURE THELARCHE—DIAGNOSIS BY ASPIRATION CYTOLOGY

Dear Editor Premature thelarche, i.e. early breast development occurring without any other manifestations of sexual development, is a breast lesion in which fine needle aspiration cytology (FNAC) is the only answer to parental worries and the surgeon’s queries. FNAC is not indicated in all cases of premature thelarche, but in clinically doubtful cases cytological confirmation in distinguishing premature thelarche from virginal hypertrophy and juvenile fibroadenoma becomes important because the treatment of these conditions varies greatly. Surgical intervention of any kind including biopsy is contraindicated in cases of premature thelarche, as unnecessary biopsy of the breast bud results in total nondevelopment of the female breast at puberty.

We have recently made a diagnosis of premature thelarche on FNAC in two girls aged 6 and 8 years, presenting with unilateral breast swelling. To the best of our knowledge, these are the first two reported cases.

Case 1: A 6-year-old girl presented with a swelling in the right breast of one and a half months duration. She had no local pain or discomfort. On examination the child’s development appeared normal. She had not reached menarche and secondary sex characters were not developed. Systemic examination did not reveal any other abnormality.

Examination of the right breast showed a small subareolar button-like swelling of 0.5 cm diameter. The swelling was firm, nontender and freely mobile. The skin over the swelling and nipple were normal. The other breast was normal.

Case 2: An 8-year-old girl presented with an asymmetrically enlarged left breast for 2 years and pain in the swelling of one month’s duration. There was no history of trauma, fever or any other complaint. The girl had not reached menarche and secondary sex characteristics were not developed.

On examination of the left breast a subareolar soft disc-like swelling of 2.0 × 2.0 cm was palpated. The swelling was movable in all directions, nontender and well defined. The position of the nipple and the skin above the swelling was normal. The other breast was normal.

Alcohol-fixed and dry smears were prepared from the material obtained in both cases. Wet-fixed smears were stained by haematoxylin-eosin