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Slide seminar case: 65 year old female, previous oestrogen and progesterone receptor and Her2 negative invasive ductal breast carcinoma (grade 3) in 1999. Now ? malignant otitis externa with facial nerve palsy. Left external auditory canal tumour.

Final diagnosis: Ceruminous gland adenocarcinoma, NOS

Ceruminous gland adenocarcinomas are rare tumours of the external auditory canal. This case contained an infiltrative adenocarcinoma with many features typical of a ceruminous gland adenocarcinoma, NOS, namely a double cell layer with focal decapitation secretion of apocrine luminal cells, within a desmoplastic stroma. The luminal cells were cytokeratin 7 positive and 20 negative. Perineural invasion was present.

The differential diagnosis for this entity includes ceruminous gland adenoma, where the distinction is based on cytological appearances, an infiltrative growth pattern and most useful in this setting, necrosis or perineural invasion. Pleomorphic adenoma would have a myxoid-chondroid rather than fibrotic stroma and neuroendocrine adenoma of the middle ear lacks decapitation secretion and would be positive with endocrine markers. It must also be distinguished from the other two subtypes of ceruminous gland adenocarcinoma: adenoid cystic carcinoma and mucoepidermoid carcinoma, on the morphologic grounds established for salivary tumours. Middle ear adenocarcinoma is rare but may need to be distinguished on radiologic or clinical grounds.

This case also raised the rare possibility of a metastasis from the previous breast ductal adenocarcinoma. The previous tumour was less differentiated and had also occurred eight years beforehand, but a metastasis could not be completely excluded. There are no reliable morphologic features that distinguish between the two. The previous tumour was triple negative (OR, PR, Her2 negative). The yellow/brown granules that are present in ceruminous adenomas are not seen in adenocarcinomas NOS.

The patient had treatment on the basis that this was a new primary adenocarcinoma.

Unfortunately the tumour recurred at the same site 6 months later, with no other metastases, which appears to confirm that this was a primary ceruminous gland adenocarcinoma.

Ceruminous gland adenocarcinoma: a clinicopathologic and immunophenotypic study of 17 cases
Crain Nikhil, Nelson Brenda L, Barnes E Leon, Thompson Lester DR.
Head Neck Pathol 2009; 3(1): 1-17.

Late metastasis of breast carcinoma to the external auditory canal.
Cumberworth VL, Friedmann I, Glover GW.
J Laryngol Otol 1994; 108(9): 808-10