Adenoid cystic carcinoma of breast and the importance of differentiation from collagenous spherules by FNAC

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Abstract
We are presenting a case of adenoid cystic carcinoma (ACC) of breast in a 63-year-old woman having lump in left breast, admitted to our hospital. Fine needle aspiration cytology of ACC was done and the cytopathological diagnosis as ACC was confirmed by histopathological examination. ACC of breast is rare, and slow growing neoplasm accounting for 0.1% of all breast neoplasms. It has favorable prognosis, as lymph node is rarely involved. ACC of breast was first termed as “cylindroma” by Billroth. The tumour cells have a spheroid appearance with the characteristic hyaline globules. The cytoplasmic globules are PAS positive and show periodic acid Schiff (PAS)-positive hyaline globules and no bipolar nuclei.

Keywords: Adenoid cystic carcinoma, breast, collagenous spherules, FNAC

Introduction
Adenoid cystic carcinoma (ACC) comprises 1% of all breast carcinomas and is associated with an excellent prognosis (see Table 1). It is a common neoplasm of the salivary gland with occurrence rate of 6.4/100,000 (Chin J Radiol. 2009; 42(2): 69–70). The majority of the ACC is seen in female, with peak incidence in third to fourth decade of life. ACC of breast is rare, and slow growing neoplasm accounting for 0.1% of all breast neoplasms. It has favorable prognosis, as lymph node is rarely involved. ACC of breast was first termed as “cylindroma” by Billroth. The tumour cells have a spheroid appearance with the characteristic hyaline globules. The cytoplasmic globules are PAS positive and show periodic acid Schiff (PAS)-positive hyaline globules and no bipolar nuclei.

Arguments for differentiation of ACC from collagenous spherulosis

Case Report
A 63-year-old woman presented to our cytology laboratory of our institute with complaint of growth of lump in left breast for 2 years (Figure 1). The lump was of firm consistency. The lesion was attached to the overlying skin and nipple retraction was seen. Ultrasonography was suggestive of a 1.6 cm nodular lesion located in the sub-areolar region which was of firm consistency. The lesion was attached to the overlying skin and nipple retraction was seen. Ultrasonography was suggestive of a 1.6 cm nodular lesion located in the sub-areolar region which was of firm consistency.

On examination the breast showed a well circumscribed 1.6 × 1.2 cm nodular lesion located in the sub-areolar region which was of firm consistency.

Discussion
Adenoid cystic carcinoma (ACC) comprised 0.1% of all breast carcinomas and is associated with an excellent prognosis. It is usually associated with other benign lesions, such as ductal hyperplasia, proliferative breast lesions, such as intra-duct trabecular hyperplasia and microscopic calcification.

Key words: Adenoid cystic carcinoma, breast, collagenous spherules, FNAC

Conclusions
ACC of breast was first termed as “cylindroma” by Billroth. The tumour cells have a spheroid appearance with the characteristic hyaline globules. The cytoplasmic globules are PAS positive and show periodic acid Schiff (PAS)-positive hyaline globules and no bipolar nuclei. ACC is a rare entity and FNAC is a useful technique in diagnosis of ACC.

References

Figures and Tables

Figure 1

Cells in a monomorphic pattern, with uniform round hyperchromatic cells present singly and in loosely cohesive clusters.

Figure 2

Cellular smear with uniform round hyperchromatic cells present singly and in loosely cohesive clusters.