Schwannoma or neurilemmoma of anterior chest wall is exceedingly rare. We describe a very rare case of schwannoma of the anterior chest wall, which was mimicking a breast mass. A 52-year-old woman presented with an incidentally found mass on breast sonography. On sonography, the precise location of mass was not determined. Breast MRI revealed that this mass was located in anterior chest wall. Surgical excision revealed benign schwannoma.

**Index words:** Schwannoma, Neurilemmoma
Breast, Ultrasound
Breast, MRI

INTRODUCTION

Schwannoma or neurilemmoma is primary nerve sheath tumors that usually arise from a peripheral nerve. Associated with the course of larger nerve trunk, schwannoma are found more commonly in the head, intracranial cavity, neck and extremities. Neurogenic tumors of the lateral and anterior chest wall are exceedingly rare (1). We report a rare case of schwannoma of the anterior chest wall which mimics a breast mass on US.

Case Report

A 52-year-old woman presented with an incidentally found mass on breast ultrasonography. There were no symptom and no family history of breast cancer. Mammography showed no definite abnormal lesion in the both breasts. Breast ultrasonography showed a well-defined, oval and hypoechoic mass located in deep portion of right breast parenchyma and anterior aspect of the chest wall (Fig. 1). The precise location whether it is inside or outside of the breast parenchyma was not definite on sonography. However, a thin hypoechoic linear structure, probable retromammary fat, was located at anterior aspect of the mass. This finding was suggestive of extramammary lesion, not mammary lesion. For further evaluation of the mass including precise location, bilateral dynamic breast MRI was performed. A low signal intensity mass was located between high signal retromammary fat and anterior chest wall on axial T1 weighted images (Fig. 2A). Digital subtraction image after contrast enhancement revealed homogeneous and well enhancement (Fig. 2B). There was no evidence of necrosis within the mass. Time-signal intensity curve showed type 1 progressive enhancement pattern (Fig. 2C).

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Surgical excision was done and pathologic examination revealed a benign schwannoma.

Discussion

Schwannoma, also known as neurinoma and neurilemmoma is a benign, slow growing neoplasm originating in any nerve that has a schwann cell sheath (2). Schwannoma is a relatively rare solitary tumor, especially on anterior chest wall. In a study of Davidson et al., of 55 intrathoracic neural tumors only 3 are located outside of posterior mediastinum (1). In about 30% schwannoma undergo malignant transformation.

Schwannomas occur at all age, being more common between 20 and 50, and they affect the sexes in roughly equal numbers. They are usually asymptomatic and noted incidentally (3).

Microscopically, two patterns are consistent in schwannoma: a hypercellular component (Antoni type-A tissue) and a loose, myxoid component (Antoni type-B tissue). Correlation of the signal intensity on T2-weighted images with microscopic findings suggested that the signal intensity of the non-cystic area of the tumor may be related to a predominance of one of the two microscopic components. The relatively low signal intensity was caused by a predominance of hypercellular Antoni type-A tissue and the relatively high signal intensity was caused by a predominance of hypocellular Antoni type ?B tissue. On Gd-DTPA enhanced T1 weighted images, the solid part of the tumor has strong and homogenous enhancements (4). The multiplanar capability and high resolution of MRI enable the precise determination of the location and extent (5).

In conclusion, when you encountered a mass located...
in deep portion of breast parenchyma, you must decide this mass is located whether breast parenchyma or ante-
rior chest wall. Meticulous sonographic examination or MRI may be helpful for evaluating precise location. 
When a mass is located in anterior chest wall, schwannoma should be considered in a the possible diagnosis.

References

Index words: Schwannoma
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