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Case Report

Radiologic manifestation of the malignant peripheral nerve sheath tumor involving the brachial plexus

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ABSTRACT

A 63-year-old African American female with history of bilateral breast cancer status after lumpectomy and radiation therapy presented with right hand, wrist, and arm pain. She was found to have a right axillary mass and a large lesion in the right brachial plexus. A biopsy of the brachial plexus mass came back as a malignant peripheral nerve sheath tumor. This case report illustrates the critical value of multiple imaging modalities in definitive diagnosis of this rare pathologic entity.

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Introduction

Malignant peripheral nerve sheath tumors (MPNSTs) are rare, aggressive, and have poor prognosis. These tumors' usual involvement of the sacral plexus with brachial plexus lesions occurring significantly less frequently. Patients typically present with nonspecific symptoms with imaging playing an essential role in early diagnosis. The purpose of this case report is to describe characteristic imaging findings, review the differential diagnostic considerations, and discuss the role of image-guided tissue sampling in the diagnosis of MPNST.

Case report

Patient is a 63-year-old African American female with history of bilateral breast cancer (pathology proven, invasive ductal carcinoma, tubular type) status after lumpectomy of right and left breast in 2008 and 2005, respectively. In 2009, patient presented with right wrist and hand pain. Initially, her symptoms were attributed to mild osteoarthritis of the interphalangeal joints seen on the radiograph and was treated conservatively without significant improvement. Further evaluation revealed a possibility of cubital tunnel syndrome for which the patient underwent a surgical release with no

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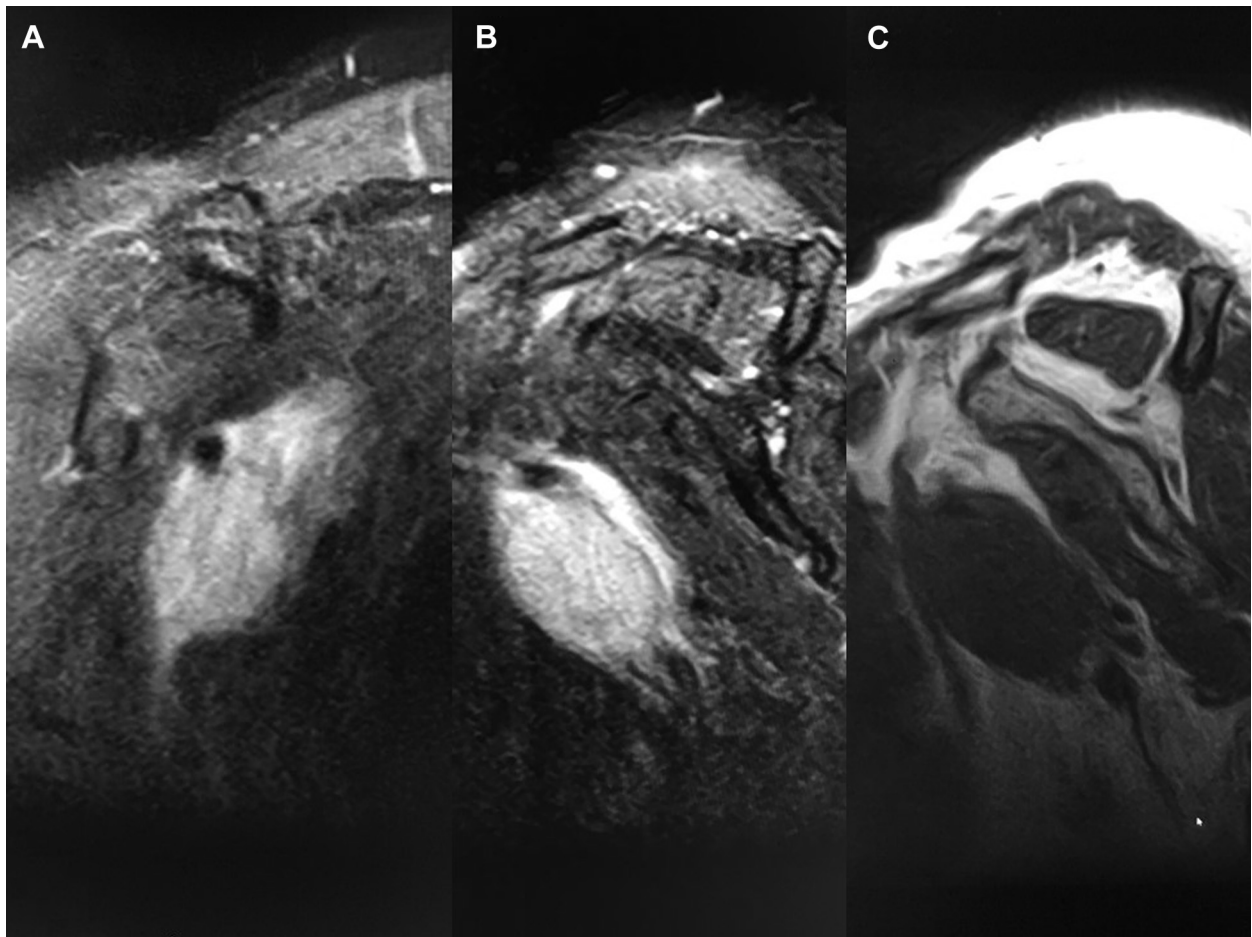


Fig. 1 – The noncontrast magnetic resonance imaging (MRI) of the shoulder demonstrate heterogenous, solid mass with hyperintense signal on sagittal (A), and coronal fat-saturated T2-weighted (B) sequences and hypointense signal on T1-weighted sequence (C).

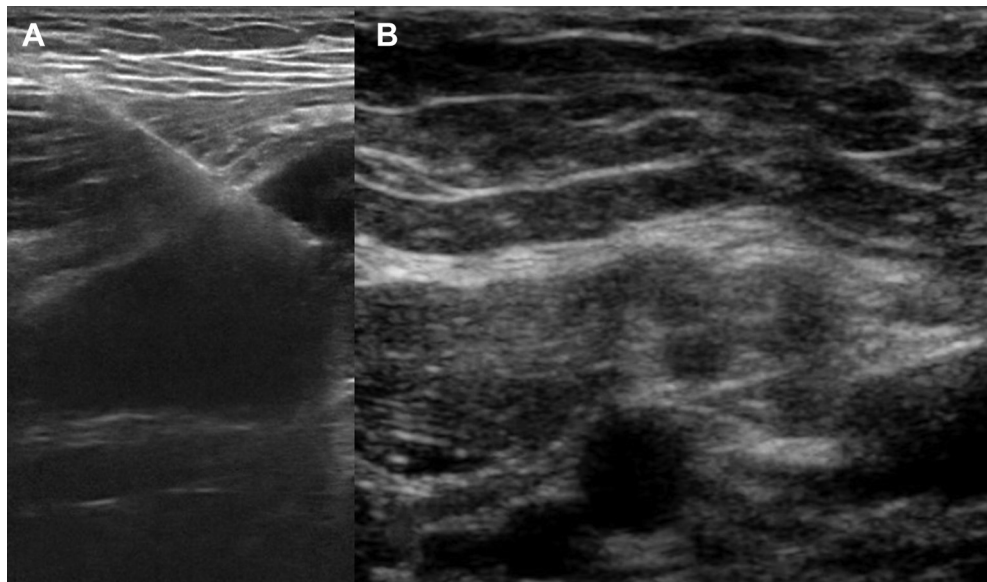


Fig. 2 – Image (A) demonstrates an ultrasound-guided biopsy. The mass appears heterogeneously hyperechoic on ultrasound (B).

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