Imaging Features Associated With Posttraumatic Breast Neuromas.

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Abstract

OBJECTIVE: The aim of this study is to review the clinical and imaging features of patients with a histopathologic diagnosis of posttraumatic breast neuromas.

MATERIALS AND METHODS: We report eight biopsy-proven posttraumatic neuromas in six patients with a history of breast surgery. Mammographic, sonographic, and breast MRI examinations were reviewed according to the BI-RADS lexicon. In addition, the tail sign, a specific sign known to be associated with neuromas in other parts of the body, was assessed.

RESULTS: Mammographic, MRI, and sonographic examinations were performed in three, four, and all six patients, respectively. The neuromas were occult on the three mammograms performed but all of them were identified on ultrasound as hypoechoic masses with parallel orientation; seven of the eight neuromas (87.5%) had an oval shape with circumscribed margins. Strain elastography performed for two patients (three neuromas) showed benign features (benign elasticity scores and fat-to-lesion ratio). Half of the masses showed a tail sign (focal thickening of the nerve adjacent to posttraumatic neuroma, similar to the dural tail sign). Of five lesions investigated by MRI, two were occult on MRI. The remaining three were visible as isointense foci on T1-weighted images, with a benign type 1 enhancement curve.

CONCLUSION: In patients who underwent breast surgery, a mass with benign features raises the possibility of a neuroma. Although the tail sign was present in half of the posttraumatic neuromas, imaging-guided biopsy remains the standard of care.

KEYWORDS: MRI; biopsy; breast; mammogram; neuroma; posttraumatic neuroma; surgery; traumatic neuroma; ultrasound

PMID: 26901025 DOI: 10.2214/AJR.14.14035

[Indexed for MEDLINE]