

# Original Report

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## Mondor's Disease of the Breast: Sonographic and Mammographic Findings

**OBJECTIVE.** The purpose of this study was to evaluate the mammographic and sonographic findings in patients with Mondor's disease of the breast.

**CONCLUSION.** The combination of a sonographic finding of a superficial vessel—with or without an intraluminal thrombus and without flow on Doppler imaging—and a mammographic finding of a tubular density is the typical sign of Mondor's disease of the breast. Women present with a palpable cordlike structure, which is often painful, especially in the acute phase of thrombophlebitis. An understanding of such an entity and knowledge of the imaging findings will help breast imagers avoid the pitfall of mistaking this finding for a dilated duct.

**M**ondor's disease of the breast is a rare benign breast condition characterized by thrombophlebitis of the superficial veins of the chest wall. This condition is rarely reported, which, in part, may be due to lack of awareness of the entity. Little has been written about the imaging findings in patients with Mondor's disease. A search of the literature showed a single published study—a case report that described the mammographic findings in patients with this condition [1]. An understanding of the pathophysiology, clinical presentation, and the imaging findings is important for the breast imager. Patients usually present with a painful breast mass, and, although Mondor's disease is usually a benign, self-limiting condition, imaging is recommended primarily for the evaluation of the palpable mass. An association with breast cancer has been reported [2].

### Subjects and Methods

During the 1-year period between October 1999 and September 2000, five patients with Mondor's disease were identified in a large mammography practice that included three breast centers. A standard two-view mammogram was obtained in all pa-

tients. Additional spot compression images in the craniocaudal and mediolateral oblique projections were obtained in four of these patients. Mammograms were obtained using a Mammoplus (International Medical Systems, Riverside, CA), a Senographe DMR (General Electric Medical Systems, Milwaukee, WI), a Performa (Instrumentarium, Tuusula, Finland), or a Contour Mammography System (Bennett Trex Medical, Copiague, NY).

Sonography was performed with a 7-MHz (or higher) transducer using Logic700MR (General Electric Medical Systems), 128 XP (Acuson, Mountain View, CA), SSD-5000 (Aloka, Mitaka-shi, Tokyo, Japan), and SSD-1700 (Aloka). Sonographic examinations included real-time as well as spectral and color Doppler imaging of the area of concern.

The following information was documented for each of the patients: age, sex, clinical presentation, and type of treatment and clinical follow-up, where appropriate. For each patient, the presence of known associated risk factors—a history of breast surgery, breast biopsy, breast inflammation or infection, or trauma—was documented.

### Results

During a 1-year period, we identified five women with Mondor's disease of the breast in a

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