

Mondor's Disease of the Breast

Lamya Ebrahim, MSc, CABS* Majeed Al Shammasi, MD** Herminia Tyminski Al Saffar, MD, ABR***

A forty-six-year-old female presented with a history of left axillary pain, discomfort, chronic fatigue and palpitations. Clinical examination revealed large, tender nodules in the left axilla which were thought to represent enlarged axillary lymph nodes. Multiple dilated veins were visible in the left axillary region. The patient was diagnosed with Mondor's disease based on the typical mammographic and ultrasound features.

Mondor's disease of the breast is an uncommon, usually benign, self-limiting disease, which usually requires conservative treatment and follow-up.

* Chief Resident

** Senior Resident

*** Consultant

Department of Radiology

Salmaniya Medical Complex

Kingdom of Bahrain

E-mail: lamiambrahim@hotmail.com

Mondor's disease, or superficial thrombophlebitis of the breast, is an uncommon condition. It is usually idiopathic, but it might be associated with direct trauma to the breast, breast surgery, thrombophilic conditions, strenuous physical activity and even breast cancer¹⁻⁴. The diagnosis is usually made clinically by the presence of a palpable cord or ridge, which represents the thrombosed superficial vein. The mammographic and ultrasound features of Mondor's disease are diagnostic. Familiarity with this disease will prevent unnecessary biopsy as it is usually a benign, self-limiting disease^{1,3}.

The aim of this report is to present a case of Mondor's disease to increase the awareness of physicians for better diagnosis and management.

THE CASE

A forty-six-year-old female presented with a history of left axillary pain and discomfort, chronic fatigue and palpitations. There was no history of breast pain or nipple discharge.

Clinical examination revealed large tender nodules in the axilla, which were thought to represent enlarged axillary lymph nodes. Few small subcutaneous nodules were found as well. Multiple dilated veins were visible in the left axillary region.

Bilateral mammogram showed beaded, serpiginous, tubular densities in the axillary tail of the left breast extending into the lower axilla, see figure 1a and b. No calcification was detected and no evidence of axillary lymphadenopathy. Breasts were otherwise unremarkable, see figure 2.

Ultrasound of the left axilla and axillary tail of the left breast showed mildly dilated superficial veins, some with intraluminal thrombus and no flow on color Doppler. No axillary lymphadenopathy, see figure 3.

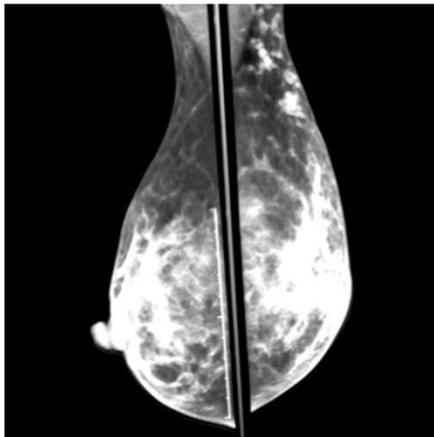


Figure 1a

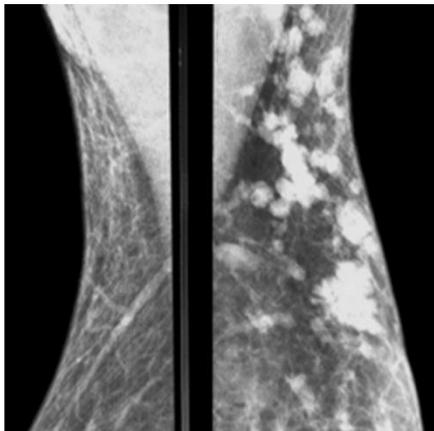


Figure 1b

Figure 1 (a and b): Magnified View of the Axillary Areas, Showing Branching Tubular Densities in the Left Axilla with Beaded Appearance

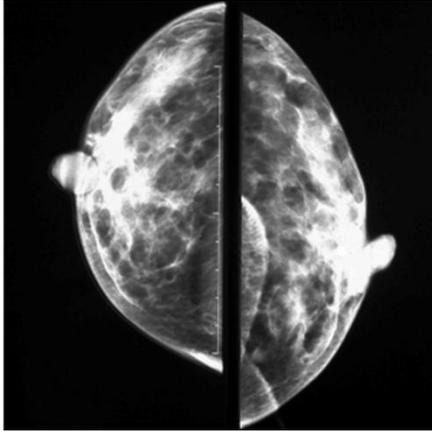


Figure 2: Cranio-caudal Mammograms, with Insignificant Abnormality

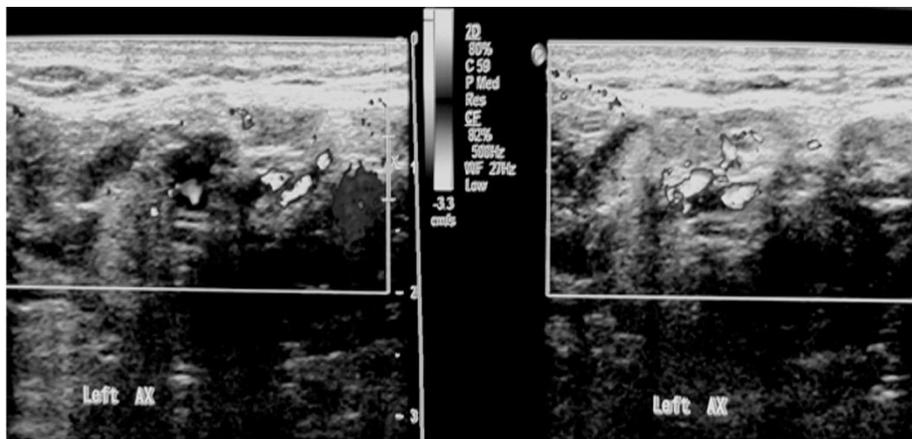


Figure 3: Left Axillary Ultrasound, a Few Normal Appearing Axillary Lymph Nodes with Dilated Veins Extending into the Left Chest Wall, Some Appeared to be Thrombosed

DISCUSSION

Superficial thrombophlebitis of the breast was first described in 1939 by the French surgeon, Henri Mondor⁵. The disease has since been named after him.

The pathophysiology of this condition is unclear. It is thought to be secondary to stagnation of blood due to pressure on the vein by a breast mass, axillary metastasis, or tight clothing. Direct trauma during breast surgery or biopsy could be another cause of Mondor's^{4,5}. Mondor's disease usually involves one of three venous channels that drain the upper lateral and lower parts of the anterior thoracic wall. The three veins are the thoracoepigastric, the lateral thoracic and the superior epigastric veins, which drain the lateral and inferior areas of the breasts^{4,6}. Therefore, the upper inner quadrants of the breasts are never involved. Mondor's disease typically occurs in middle-aged females; however, males and children might also be affected.

Two studies have shown a vague association between breast cancer and Mondor's disease. Catania et al reported 8 (12.7%) out of 63 patients with Mondor's disease to have breast cancer¹. Six of the cancers were clinically palpable, but two were detected only with mammography. Another study by Hou et al showed 2 (3.12%) out of 64 patients with Mondor's disease to have associated breast cancers. For this reason, mammography is highly recommended in all patients with a clinical diagnosis of Mondor's disease even if the physical examination is unremarkable.

Clinically, the patients typically present with sudden onset of a tender subcutaneous cord. Perivascular inflammation may cause retraction of the overlying skin. With time, the cord becomes painless and may be replaced by a tough fibrotic band. Eventually, complete resolution of the clinical findings would occur.

Mammograms show dilated tubular or branching densities, which may be mistaken for dilated ducts. Unlike ducts, however, the thrombosed veins tend to be longer, have a beaded appearance and are commonly located in the upper outer quadrants. When the thrombosed veins involve the subareolar area, they do not terminate at the level of the areola compared to dilated mammary ducts which do terminate at the level of the areola^{7,8}.

Ultrasound, reveals thrombosed vein, dilated, non-compressible, anechoic tubular structure in the superficial tissues with no internal blood flow on color Doppler⁸. Ultrasound is also helpful when the mammogram is non-diagnostic, as when the breast tissues are mammographically dense, and the thrombosed vessels are not visualized.

Conservative treatment is recommended. Anti-inflammatory and analgesic drugs for pain control and warm compresses are prescribed. Antibiotics and anticoagulants are not indicated⁷. In most cases, symptoms usually last for few weeks with complete resolution of the clinical findings in 6 weeks. Symptoms may occasionally last for up to 6 months. The resolution of abnormalities should be confirmed clinically and radiologically⁴.

CONCLUSION

Mondor's disease is an uncommon entity with typical clinical and radiological findings. Although the disease is usually benign and self-limiting, a mammogram is advised as there is a small risk of breast cancer. Conservative treatment and close follow-up are recommended.

Author Contribution: All authors share equal effort contribution towards (1) substantial contribution to conception and design, acquisition, analysis and interpretation of data; (2) drafting the article and revising it critically for important intellectual content; and (3) final approval of manuscript version to be published. Yes.

Potential Conflicts of Interest: None.

Competing Interest: None.

Sponsorship: None.

Submission Date: 2 June 2015.

Acceptance Date: 22 June 2015.

Ethical Approval: Approved by the Department of Radiology, Salmaniya Medical Complex, Kingdom of Bahrain.

REFERENCES

1. Catania S, Zurrída S, Veronesi P, et al. Mondor's Disease and Breast Cancer. *Cancer* 1992; 69(9):2267-70.
2. Hou MF, Huang CJ, Huang YS, et al. Mondor's Disease in the Breast. *Kaohsiung J Med Sci* 1999; 15(11):632-9.
3. Kadioglu H, Yildiz S, Ersoy YE, et al. An Unusual Case Caused by a Common Reason: Mondor's Disease by Oral Contraceptives. *Int J Surg Case Rep* 2013; 4(10):855-7.
4. Vincenza Polito M, De Cicco P, Apicella R. Tight Bra in a 34-Year-Old Woman: An Unusual Cause of Mondor's Disease. *Ann Vasc Dis* 2014; 7(2):149-51.
5. Mondor H. Tronculite Sous-Cutanée Subaigue de la Paroi Thoracique Antéro-Latérale. *Mem Acad Chir* 1939; 65(28):1271-8.
6. Salemis NS, Merkouris S, Kimpouri K. Mondor's Disease of the Breast. A Retrospective Review. *Breast Dis* 2011; 33(3):103-7.
7. Shetty MK, Watson AB. Mondor's Disease of the Breast: Sonographic and Mammographic Findings. *AJR Am J Roentgenol* 2001; 177(4):893-6.
8. Conant EF, Wilkes AN, Mendelson EB, et al. Superficial Thrombophlebitis of the Breast (Mondor's Disease): Mammographic Findings. *AJR Am J Roentgenol* 1993; 160(6):1201-3.