

Case Report

Mondor's Disease of the Breast in a Nigerian Woman Previously Treated for Invasive Ductal Carcinoma in the Contralateral Breast: A Case Report

SA Olarinoye-Akorede, BT Silas¹

Department of Radiology,
Ahmadu Bello University
Teaching Hospital, Zaria,
¹Department of Radiology,
Kaduna State University,
Kaduna, Nigeria

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INTRODUCTION

Mondor's disease is a chronic condition which is characterized by thrombophlebitis of superficial veins of the breast and anterior chest wall. Anatomically, the involved vessels are the lateral thoracic, thoracoepigastric, or superior epigastric veins.^[1] It has also been described in the arm, abdomen, or penis.^[2] Its etiology is speculative, however, it could be idiopathic or caused by direct or indirect trauma.^[3-5] Mondor's disease may occur after breast augmentation surgery, physical strain, tight dressings and tight fitting bras, axillary shavings, and blood dyscrasias.^[1-7] Less common causes include oral contraceptives, and vasculitis.^[8-10] In few reports, however, Mondor's disease has been associated with malignancy,^[3,11-14] although the exact relationship is uncertain. The pathologic features consist of venous thrombosis, sclerosis, and infiltration by inflammatory cells. With resolution of symptoms, there is recanalization of the affected vessel. The diagnosis

ABSTRACT

Mondor's disease is a self-limiting sclerosing angitis mostly affecting the superficial veins of the breast and chest wall. It is seldom diagnosed, and its etiology and epidemiology are speculative. However, numerous predisposing factors including breast cancer have been postulated. In Nigerian literature, only two cases have been documented to the best of our knowledge. This report is aimed at reminding breast specialists to include it as a diagnostic consideration in patients presenting with a breast lump in the appropriate clinical setting. Its imaging features are also highlighted because it may be incorrectly overlooked as mere ductal dilatation. We present the case of a 60-year-old woman who complained of a painful cordlike lesion in her right breast. Mondor's disease was diagnosed based on the clinical and radiological findings. She had also been previously treated for invasive ductal breast carcinoma in the contralateral breast. Mondor's disease is usually a benign entity, which may resolve spontaneously. On the other hand, it may also be the sole presenting symptom or clue of a breast malignancy; hence, a need for increased awareness.

KEYWORDS: Breast, ductal carcinoma, Mondor's disease

of Mondor's disease rests mainly on clinical history and imaging. In Nigeria, the paucity of information on Mondor's disease could be due to the fact that it is easily overlooked as ductal dilatation or simply due to lack of familiarity. We hope that this report will help increase our sensitivity to the condition and help guide management decisions.

CASE PRESENTATION

A 60-year-old postmenopausal woman presented to the breast unit of our surgical outpatient clinic complaining of a 3-day history of sudden palpable cordlike lesion in the upper outer region of her right breast. Pain was aggravated by touching the cord or by movement of the right arm. There was no skin redness. She also

Address for correspondence: Dr. SA Olarinoye-Akorede,
Department of Radiology, Ahmadu Bello University Teaching
Hospital, Zaria, Nigeria.
E-mail: olarinoyebs@yahoo.com

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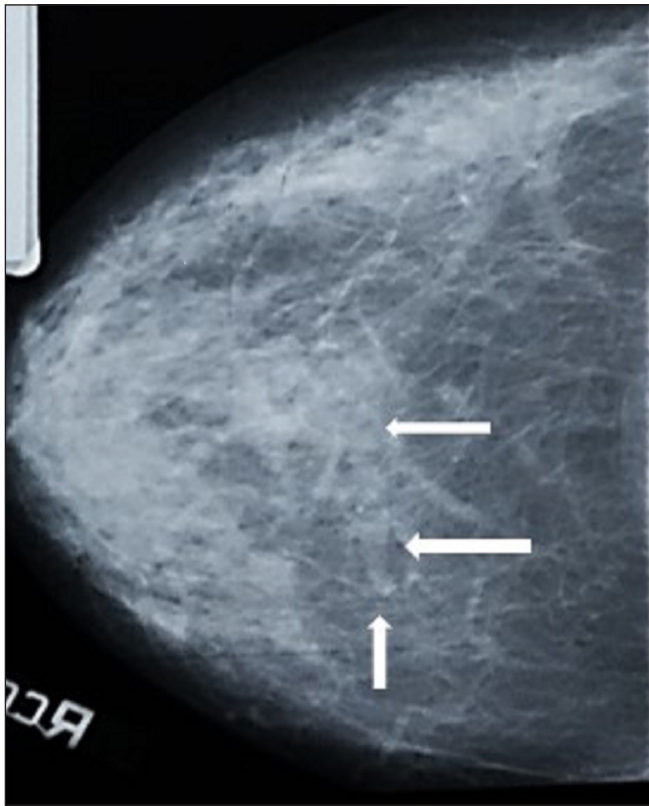


Figure 1: Craniocaudal view of the right breast showing a tubular opacity (arrows)

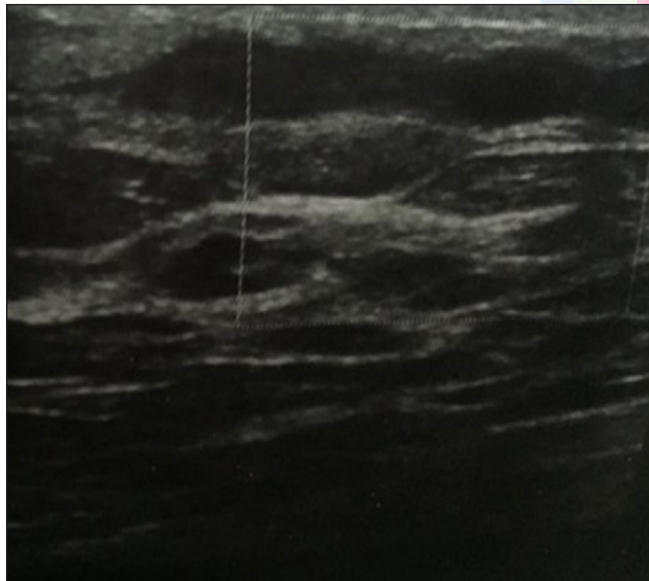


Figure 3: The lesion show no color flow on Doppler interrogation

noticed that her breast had slightly increased in size. She could not recall any history of trauma or infection prior to her symptoms. The patient had been diagnosed 10 years previously with stage II (T2 N1 M0) invasive ductal carcinoma in the contralateral breast. She had a modified radical mastectomy (Auchincloss), six courses

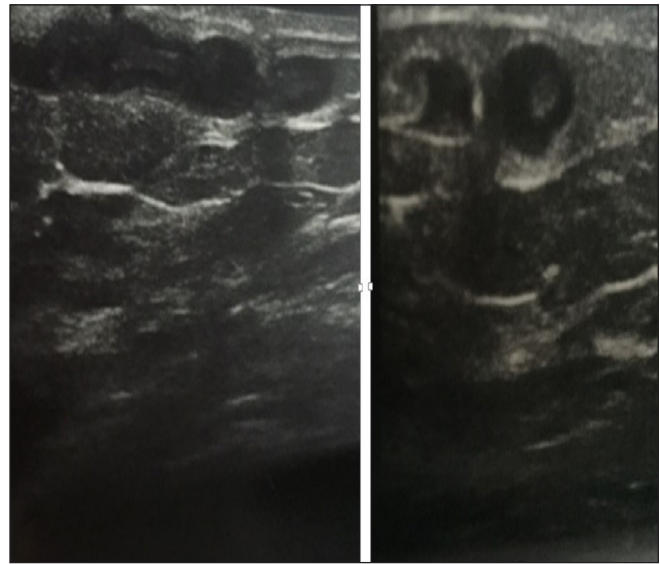


Figure 2: B-mode ultrasound of the right breast. (a) Longitudinal scan and (b) transverse scan showing a superficial tubular hypoechoic structure which appears beaded and contains intraluminal thrombus

of chemotherapy (cyclophosphamide, methotrexate, promethazine) and external beam radiotherapy. She also had tamoxifen for 5 years. There was no previous history of a thromboembolic disease.

On examination, her general clinical condition was stable. Her right breast was large and pendulous with no obvious signs of trauma or redness. There was, however, a palpable tender cordlike lesion in the upper outer quadrant of the breast. No visible skin dimple was seen. There was also no associated lymphadenopathy. Her left chest wall showed a well-healed post mastectomy scar.

Right breast 2-view (craniocaudal and mediolateral oblique) mammogram showed a heterogeneously dense parenchymal pattern, obscuring mammographic detail. However, on the craniocaudal view, a tubular density was noted [Figure 1]. Ultrasound examination of the breast showed a superficial (subcutaneous) tubular hypoechoic lesion which appeared beaded and contained intraluminal thrombi [Figure 2] and [Figure 3]. The lesion measured 8.5 cm in length and 5 mm in diameter and it was noncompressible. There was no flow on color Doppler or spectral studies. The diagnosis of Mondor's disease was made based on clinical history and imaging findings. Finally, a Birads 3 category was assigned. She was reassured and treated conservatively with nonsteroidal anti-inflammatory agents and hot wet compress. On follow-up 10 weeks later, her symptoms had subsided, and the repeat ultrasound scan of her right breast showed complete resolution of the initial lesion.

DISCUSSION

Mondor's disease is still under-diagnosed and under-reported. This is despite the fact that it had been a recognized entity even prior to 1938^[15-17] when Henry Mondor gave a detailed account.^[18] It is generally considered as benign and self-limiting. However, its key clinical significance lies in differentiating between a benign process from that which is associated with a primary breast cancer^[3,11-14] or a metastatic disease from a non-mammary site.^[14,19] In the index patient, the exact cause is still obscure. The popular risk factors such as trauma, tight bra or clothing, blood dyscrasias, oral contraceptives, or ipsilateral breast surgery were absent. In her case, our speculation is that idiopathic, and remotely, a previous history of breast cancer are probable risk factors. A case of left breast cancer and right arm Mondor's disease was reported by Hasegawa and Okita,^[20] however, in this case direct trauma from intravenous catheterization was identified. In some other studies, Mondor's disease with associated breast cancer without obvious etiology such as trauma or breast surgery have been reported.^[12,21-23] These studies documented a prevalence between 0 and 13%. The highest incidence (12.7%) of Mondor's disease in association with breast cancer reported in the literature so far was by Catania *et al.* Out of 63 patients with Mondor's disease in a 10-year period, 8 had associated breast cancer. Females are three times as affected with Mondor's disease of the breast, however, it has also been reported in males.^[24,25]

The condition is regarded as self-limiting, however, Alvarez *et al.*^[21] and Bejanga *et al.*^[22] have described that Mondor's disease could be associated with systemic superficial thrombophlebitis syndrome and could also be complicated by recurrence or thromboembolic phenomena.

The diagnosis of Mondor's disease rests considerably on history, physical examination, and ultrasonography. The clinical hallmark is a cordlike palpable lesion in the outer breast quadrant, which may be painful or painless. Ultrasound is an important tool to discriminate between a thrombosed vessel and a dilated duct which is its closest mimic. Perivenous fibrosis causes the typical bowstringing or beaded appearance of the thrombosed vessel, which is seen sonographically. A thrombosed vessel also lacks flow on color and spectral Doppler. These characteristic findings and complete resolution of ultrasound findings on follow-up 10 weeks later obviated the need for biopsy in our patient. Recently, the American College of Radiology (ACR) in its breast imaging reporting and data systems (BIRADS) for breast ultrasound (5th edition)^[26] classified Mondor's disease under special cases ie cases with unique diagnosis.

Mammography shows a tubular density, however, in most other cases it could be inconclusive or even negative. Nonetheless, Catania *et al.*,^[12] recommend mammography, because in their report, 2 out of the 8 patients with Mondor's disease were diagnosed based on mammography alone. A negative mammogram would also be useful to exclude other differentials such as inflammatory carcinoma, which would have positive findings.

Laboratory studies are generally not required however, immunohistochemical staining for CD31 and D240 could help distinguish small veins from lymphatic vessels.^[1]

Spontaneous resolution usually occurs in 2-10 weeks.^[4,12] Age and breast size could affect time to heal, with large pendulous breasts taking longer.^[4]

Management involves reassurance or treatment with analgesics and warm compress when required. The current advocate for systemic anticoagulant has not received widespread acceptance. However, surgery is indicated when treatment is ineffective or where there is recurrence.^[20]

CONCLUSION

Mondor's disease of the breast is rare. However, the diagnosis can be straightforward only if the physician is familiar with the condition. A correct diagnosis is mandatory for optimal treatment either to prevent unwarranted investigations or to uncover an occult malignancy.

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Conflicting Interest

There are no conflicts of interest.

REFERENCES

1. Komala N, Roopa Kulkarni, Kapil Dev M. Mondor's disease. *Int J Anat Res* 2014;2:660-3.
2. Raviv B, Israelit SH. Mondor's disease of the chest wall-A forgotten cause of chest pain: Clinical approach and treatment. *J Gen Pract* 2014;2:157.
3. Hou MF, Huang CJ, Huang YS, Hsieh JS, Chan HM, Wang JY, *et al.* Mondor's disease of the breast. *Kaohsiung J Med Sci* 1999;15:632-9.
4. Pugh CM, DeWitty R. Mondor's disease. *J Natl Med Assoc* 1996;88:359-63.
5. Salemis NS, Merkouris S, Kimpouri K. Mondor's disease of the breast. A retrospective review. *Breast Dis* 2011;33:103-7.
6. Adeniji-Sofoluwe A, Afolabi O. Mondor's disease: Classical imaging findings in the breast. *BMJ Case Rep* 2011:2011.
7. Viana GP, Okano FM. Superficial thrombophlebitis (Mondor's Disease) after breast augmentation surgery. *Indian J Plast Surg* 2008;41:219-21.
8. Kadioglu H, Yildiz S, Ersoy YE, Yücel S, Müslümanoğlu M. An

- unusual case caused by a common reason: Mondor's disease by oral contraceptives. *Int J Surg Case Rep* 2013;4:855-7.
9. Khan UD. Mondor disease: A case report and review of the literature. *Aesthet Surg J* 2009;29:209-12.
 10. Honig C, Rado R. Mondor's disease- superficial phlebitis of the chest wall, a review of seven cases. *Ann Surg* 1961;153:589-591.
 11. Chiedozi LC, Aghahowa JA, Mondor's disease associated with breast cancer. *Surgery* 1988;103:438-9.
 12. Catania S, Zurrida S, Veronesi P, Galimberti V, Bono A, Plichinotta A. Mondor's disease and breast cancer. *Cancer* 1992;69:2267-70.
 13. Leal B, Vieira S, Carvalho B, Correia A, Almeida B. Mondor's disease in a patient previously treated for breast carcinoma in situ: A case report. *N Z Med J* 2012;125:100-2.
 14. Courtney SP, Polaczar S, Raftery T. Mondor's disease associated with metastatic lung cancer in the breast. *Postgrad Med J* 1989;65:779-80.
 15. Fagge CH. Remarks on certain cutaneous affections. *Guy's Hospital Rep* 1869;15:295-302.
 16. Thomford Neil R, William J Holaday. (Mondor's Disease Phlebitis of the Thoracoepigastric Vein). *Ann Surg* 1969;170:1035-7.
 17. Fiessinger N, Mathieu P. Thrombophlé bites des veins de la paroi thoraco-abdominale. *Bull Soc Med Hôp Paris* 1922;46:352.
 18. Mondor H. Tronculite sours-cutanee subaigue de la paroi thoracique anterolaterale. *Mem Acad Chir* 1939;65:1271-8.
 19. Millet DR, Cesaria TC, Slater LM. Mondor's disease associated with metastatic axillary nodes. *Cancer* 1985;56:903-4.
 20. Hasegawa T, Okita Y. Mondor's Disease in the Arm after Intravenous Chemotherapy Following Breast Cancer Surgery. *Ann Vasc Dis* 2010;3:244-6.
 21. Alvarez-Garrido H, Garrido-Rios AA, Sanz-Munoz C, Miranda-Romero A. Mondor's disease. *Clin Exp Dermatol* 2009;34:753-6.
 22. Bejanga BI, Mondor's disease: Analysis of 30 cases. *J R Coll of Surg Edinb* 1992;37:322-4.
 23. Roscher AA, Weinstein E. The clinic pathological spectrum of Mondor's disease: An important surgical entity. *Int Surg* 1980;65:325-9.
 24. Mayor M, Buron I, De Mora JC, Lázaro TE, Hernández-Cano N, Rubio FA, *et al.* Mondor's disease. *Int J Dermatol* 2000;39:922-5.
 25. Markopoulos C, Kouskos E, Mantas D, Kakasis J, Antonopoulou Z, Kontzoglou K. Mondor's disease of the breast: Is there any relation to breast cancer. *Eur J Gynaecol Oncol* 2005;26:213-4.
 26. American College of Radiology Breast Imaging Reporting and Data System® (BI-RADS®) 5th edition. Reston, Va: American College of Radiology; 2014.

