CASE REPORT https://doi.org/10.3126/njms.v8i2.59988

Mondor's Disease- Rare Entity Presenting As Breast Pain And Swelling: A Case Report

Kayastha P [1], Paudel S [2], Wagle G [3], Katwal S[4], Kayastha K[5]

[1]Assistant Professor,[2] Associate Professor, [3]Resident Department of Radiodiagnosis and Imaging, Tribhuvan University Teaching Hospital, Kathmandu, Nepal,[4]Radiologist, Department of Radiology and Imaging, Dadeldhura Subregional Hospital, Nepal, [5]Medical officer, Grande International Hospital, Dhapasi, Kathmandu, Nepal

Received: January 11, 2023 **Accepted:** February 29, 2023 **Published:** July 31, 2023

Cite this paper: Mondor's disease: Rare entity presenting as breast pain and swelling: A case report. *Nepal Journal of Medical Sciences*. 2023;*8*(2): 52-6. https://doi.org/10.3126/njms.v8i2.59988

ABSTRACT

Mondor's disease is a condition characterized by thrombophlebitis of the superficial veins of the breast and anterior chest wall. Patients usually present with linear cord-like swelling in the breast and chest wall and the diagnosis is often made clinically. Ultrasound with Doppler confirms the diagnosis. Here we report a case of a 30-year-old woman who presented with right breast pain and swelling. Physical examination revealed a tender, soft to firm lump in the right breast with adjacent skin erythema. Ultrasound demonstrated superficial thrombophlebitis of the anterior chest wall vein of the right breast with no abnormality in underlying breast tissue; findings consistent with Mondor's disease. The patient was managed with non-steroidal anti-inflammatory drugs and clinical reassurance.

Keywords: *Mastodynia; Thrombophlebitis; Ultrasonography*

INTRODUCTION

Breast pain and swelling are common presentations encountered in clinical practice. Mondor's disease (MD) is a rare cause of breast and chest pain. MD is a condition characterized by thrombophlebitis of the superficial veins of the breast and anterior chest wall. Initially, this condition presents with the rapid development of a linear to serpiginous cord-like lesion in subcutaneous tissue that causes pain at an early stage. A natural progression to a painless fibrous band is an expected phenomenon. The diagnosis is often made clinically. Demonstration of thrombophlebitis by ultrasound with Doppler confirms the diagnosis. It is a self-

Corresponding Author:
Dr. Sharma Paudel
Department of Radiodiagnosis and Imaging,
Tribhuvan University Teaching Hospital
Email: sharmapaudel@gmail.com

limiting condition and is often managed conservatively. However, it causes patient anxiety and discomfort. Here we report a case of a 30-year-old Nepali woman who presented with breast pain and swelling and was diagnosed as having Mondor's disease.

CASE REPORT

A 30-year-old lactating Nepali woman presented with breast pain and swelling in her right breast to the Breast and Thyroid Unit of our tertiary care centre. The breast pain and swelling were of four days duration. The pain was not related to excretion or exercise. There was no nipple discharge. She could not recall any trauma to her chest. Low-grade fever was documented three days back with a maximum temperature of 100 degrees Fahrenheit. She had no systemic symptoms such as headache, loss of appetite or loss of weight. She had no significant past medical or surgical history of note. There is no family history of either breast carcinoma or inherited thrombophilic disorders. She had regular menstrual cycles and was not using contraceptives.

On physical examination approximately 4.0 x 3.0 cm sized, tender, linear cord like soft to firm lump was noted in the right breast over the 9 to 10 O'clock position. Overlying skin erythema was noted. Cord-like swelling just under the skin was made prominent by the abduction of her right arm and elevation of her right breast. No nipple discharge was seen on compression. No other abnormalities were found on examination of her right breast. The left breast was unremarkable. The bilateral axillary region showed no lymphadenopathy. She had no physical signs suggestive of vasculitis. The rest of the clinical examination was unremarkable and all vital signs were within normal range.

She was then sent for ultrasonography of both breast and axilla. Grey-scale ultrasonography showed a non-compressible dilated tortuous right lateral thoracic vein with areas of both anechoic and echogenic material inside the lumen (Figures 1 and 2).

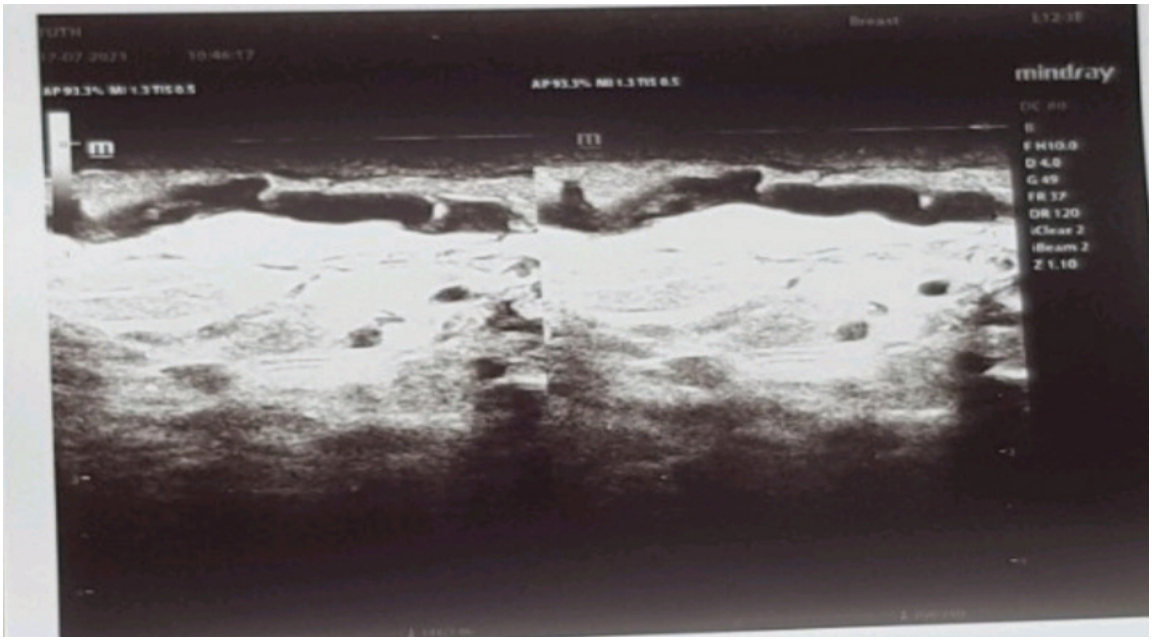

Figure 1: Ultrasound scan showing dilated superficial vein with a beaded appearance

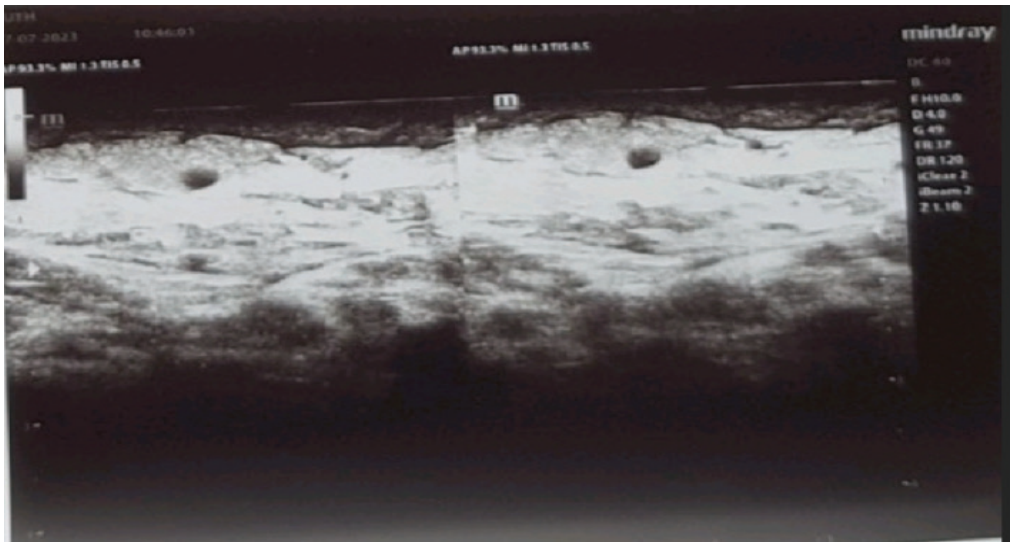

Figure 2: Ultrasound images showing non-compressible vein. Images acquired before (left) and after compression (right)

Figure 3: Color Doppler ultrasound showing no flow signal within the dilated vein

Color Doppler revealed no flow signal within the vein which was suggestive of thrombosis (Figure 3). The subcutaneous fat was echogenic.

These features are suggestive of superficial thrombophlebitis. A scan of the rest of both breasts and axilla revealed no abnormalities. She was reassured and advised warm compression and avoidance of tight clothing. She was treated with a course of ibuprofen and her symptoms resolved completely at 4 weeks.

DISCUSSION

Mondor's disease is a rare clinical entity characterized by thrombophlebitis of the subcutaneous veins of the anterior chest wall. It was first described in detail by Henri Mondor in 1939. Thoraco-epigastric, superficial epigastric, and lateral thoracic veins are the most common sites of involvement (Figure 4). The most commonly involved vessel is the superior epigastric vein.[1] The upper, inner portions of the breast are never involved. MD can also occur on the penis, groin, antecubital fossa, and posterior cervical region. [2,3]

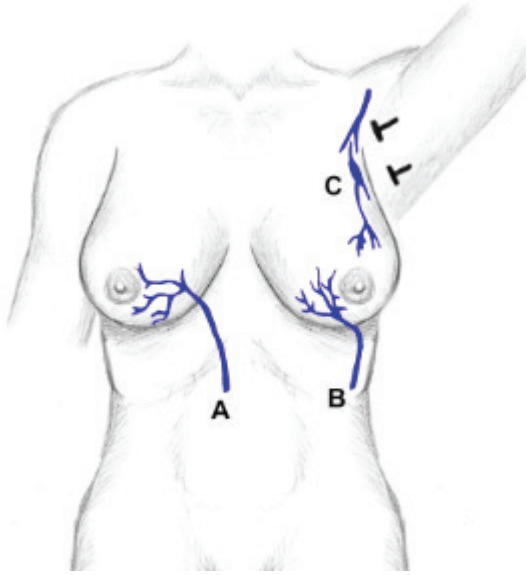

Figure 4: Illustration of the veins involved in Mondor disease. A: superior epigastric vein, B: thoraco-epigastric vein and C: lateral thoracic vein

The pathophysiology of this condition is not very clear. It is postulated that direct trauma, pressure on the vein with stagnation of blood, and stretching and relaxing of the vein are the underlying mechanisms for the development of MD.[4] Although hormone therapy, breast cancer, thrombophilic conditions and surgical or physical trauma have been identified as the common etiological factors, most commonly it is idiopathic. Surgical trauma includes a history of breast surgery and breast biopsy. Possible physical strain, as might be experienced by bodybuilders, tight dressings tight-fitting bras, and axillary shaving are also implicated in MD.

Fewer than 400 cases have been described worldwide.[5] No racial or ethnic predilection is evident. MD is three times more common in women than in men.[6] The disease can occur in persons of any age, but most patients are aged 30-60 years.

Mondor disease has a variable presentation. Breast pain, chest pain or discomfort, lump in the breast, skin redness, and low-grade fever are the usual presenting complaints. The sudden appearance of a subcutaneous cord, which is initially red and tender and subsequently becomes a painless, tough, fibrous band is characteristic. The condition, though benign and self-limited, has been associated with breast cancer. And, the physician must be aware of its existence to properly diagnose it and to rule out the presence of systemic disorders, especially breast cancer.[7]

Physical examination reveals a tender cord-like structure with erythema. The tenderness gradually subsides, while the thrombus organizes and recanalizes, leaving a non-tender, hard, ropelike band. This band remains for varying periods up to several weeks. Diagnosis is usually made clinically.

No laboratory studies are necessary for diagnosis. However, ultrasound with Doppler is useful to confirm the diagnosis and exclude underlying breast pathology.

On ultrasound, MD appears as a tubular anechoic or isoechoic, non-compressible, structure with multiple areas of narrowing, giving a beaded appearance. Sometimes low-level internal echoes may be present representing a clot. The surrounding soft tissues may be hyperechoic due to the associated inflammatory response. No flow is present in color or spectral Doppler studies and in some situations, an abrupt cut-off with the normal vessel may be seen. In mammography, it appears as superficially located tubular beaded density corresponding to a palpable cord-like mass. However, Mammography is normal in a significant proportion of cases. Supportive care and expectant management are sufficient in most cases. Warm compression, nonsteroidal anti-inflammatory medications like ibuprofen, indomethacin and abstinence from irritating clothing or activities are first-line therapies. Most lesions will resolve with cessation of discomfort and dissolution of the palpable cord.[8] Treatment

with low molecular weight heparin or aspirin is not recommended in patients without an underlying hypercoagulable state inciting superficial thrombophlebitis.

CONCLUSION

Breast pain and swellings are common presentations encountered in clinical practice. Mondor's disease is a rare condition which involves thrombophlebitis of superficial veins of the breast and anterior chest wall. Awareness of this medical condition helps to cut down unnecessary investigations and personal anxiety. It is a self-limiting condition and usually, reassurance suffices. However, it should be evaluated carefully as sometimes it is associated with sinister pathologies like breast cancer and thrombophilic states.

CONFLICT OF INTEREST

None

SOURCES OF FUNDING

None

REFERENCES

1. Amano M, Shimizu T. Mondor's disease: A review of the literature. Intern Med. 2018;57(18):2607–12. http://dx.doi.org/10.2169/internalmedicine.0495-17
2. Álvarez-Garrido H, Garrido-Ríos AA, Sanz-Muñoz C, Miranda-Romero A. Mondor's disease. Clin Exp Dermatol. 2009;34(7):753–6. http://dx.doi.org/10.1111/j.1365-2230.2009.03430.x
3. Marsaudon E, C. Legal, Gayoux D, Weber O. La maladie de Mondor pénienne : une observation. Rev Med Interne. 2016;37(9):636–8. https://pubmed.ncbi.nlm.nih.gov/26971966/
4. Hogan GF. Mondor's disease. Arch Intern Med. 1964;113(6):881. http://dx.doi.org/10.1001/archinte.1964.00280120081015
5. Quéhé P, Saliou A-H, Guias B, Bressollette L. Maladie de Mondor. À propos de trois cas et revue de la littérature. J Mal Vasc. 2009;34(1):54–60. http://dx.doi.org/10.1016/j.jmv.2008.10.007
6. Weinstein EC. Mondor's disease. West J Med. 1975;123(1):56-7. https://pubmed.ncbi.nlm.nih.gov/1154786/
7. Thalhammer C, Aschwanden M. Morbus Mondor (Mondor-Phlebitis, "Eisendrahtthrombophlebitis"). Dtsch Med Wochenschr. 2007;132(7):325–6. http://dx.doi.org/10.1055/s-2007-959327
8. Pasta V, D'Orazi V, Sottile D, Del Vecchio L, Panunzi A, Urciuoli P. Breast Mondor's disease: Diagnosis and management of six new cases of this underestimated pathology. Phlebology. 2015;30(8):564–8. http://dx.doi.org/10.1177/0268355514553494