Mondor's Disease

Siti Kamariah CM, Humairah SC

Department of Radiology and IIUM Breast Centre, International Islamic University Malaysia, Kuantan, Pahang, Malaysia

ABSTRACT

A Mondor's disease is a rare, benign and self-limiting condition. It is due to thrombophlebitis of the superficial veins of the breast and chest wall. It usually occurs in middle-aged women who present with a palpable cord-like structure, often painful in the acute phase. The aetiology is unknown, and may be related to trauma, surgery, infection or tight clothing. The finding of a superficial vessel seen as a linear opacity on mammography and a tubular structure on ultrasound is typical. An intra-luminal thrombus may be seen on ultrasound, and there may be absent flow on Doppler imaging. Conservative treatment is usually instituted, although surgery may be indicated in certain circumstances.

KEYWORDS: Mondor's disease, Thrombophlebitis, Superficial vein.

CASE REPORT

INTRODUCTION

Mondor's disease is an uncommon disorder, occurring mostly in middle-aged women. It is characterized by superficial thrombophlebitis involving the thoracoepigastric veins and/or their confluents. Rare cases have been reported in atypical sites like the upper arms, abdomen, groin and penis. The most common clinical features are the presence of a tender subcutaneous linear or winding cord-like structure, corresponding to the affected vessel, often associated with skin redness, oedema or retraction. Mondor's disease may be primary or secondary to local trauma, surgical procedures, bandaging, tight clothing and infections, and may also be associated with breast cancer. The condition is usually benign and self-limiting, requiring only symptomatic treatment. Surgery is indicated when it is associated with malignancies or when severe local pain and skin retraction are present. A case of spontaneously occurring Mondor's disease is described with imaging findings. Imaging findings can aid in diagnosing and monitoring disease resolution.

CASE REPORT

A 50 year-old Malay lady presented with a week's history of a hard, linear cord-like mass at the upper outer quadrant of the right breast, associated with mild tenderness. There was no preceding history of trauma or a family history of breast cancer. Mammogram showed a faint linear density at the upper breast on the right mediolateral oblique (MLO) view, measuring 2.8 cm in length. Ultrasound showed a non-compressible, hypoechoic undulating tubular structure measuring 2.2 x 0.3 x 0.5 cm in the subcutaneous fat. Colour Doppler imaging revealed no flow in this structure, although arterial flow was observed adjacent to it, suggesting that it may be a thrombosed superficial vein. The patient was treated conservatively, and follow-up ultrasound six months later showed complete resolution of the lesion.

DISCUSSION

Mondor's disease of the breast is a benign condition characterized by superficial thrombophlebitis in the mammary region. Anatomically, the affected veins may be the lateral thoracic, thoracoepigastric, and superior epigastric veins. This condition was first described by Faage in 1869 and was subsequently characterized by the French surgeon Henry Mondor in 1939. The majority of affected patients are females between 30 and 60 years of age. The etiology of this condition is still not clear, but it is frequently multifactorial.[1,2,3] The most common aetiopathogenic factors include traumatic events, excessive physical activity, surgical procedures, [4,5,6] compressive bandages or tight clothing, inflammatory process or infections [7] and benign or malignant breast tumors.

Sudden onset of pain followed by the appearance of a tender, palpable cord is the most common presentation of Mondor's disease.[8] Mammograms show thickened ropelike or dilated tubular density indicative of the thrombosed portion of the superficial vein. With thrombophlebitis, the beaded segment of the vein is continuous with the uninvolved portions of the visible vessel.[1,3] On ultrasound, the thrombosed vessel appears as a superficially located, long, tubular, anechoic structure with a beaded appearance that does not show any flow on colour or spectral Doppler studies.[1] It has been described as being 3 to 5mm in diameter with lengths varying from 5 to 30mm.[8]

A thrombosed vein tends to be longer than a duct, have a beaded appearance, and is seen most com-

Corresponding author;

Dr. Siti Kamariah Che Mohamed
Department of Radiology,
International Islamic University Malaysia,
Jalan Hospital Campus,
25100 Kuantan, Pahang Darul Makmur, Malaysia.
Email: skamariah08@gmail.com

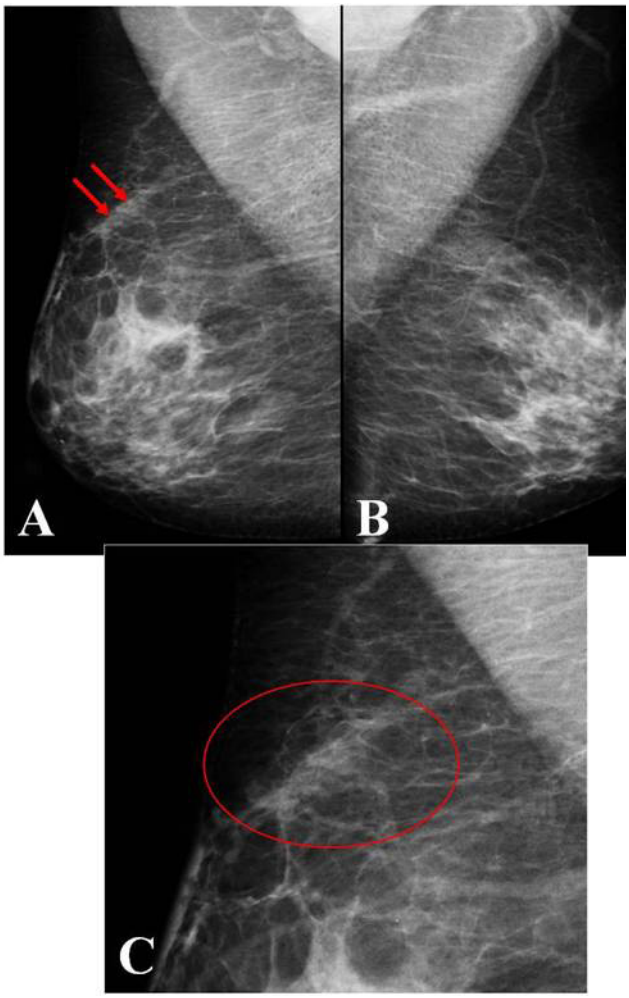

Figure 1: A and B, Right mediolateral oblique (A) and left mediolateral oblique (B) mammograms show a linear density (arrow) at upper outer quadrant of the right breast, deemed consistent with superficial thrombophlebitis. Magnified right mediolateral oblique view (C).

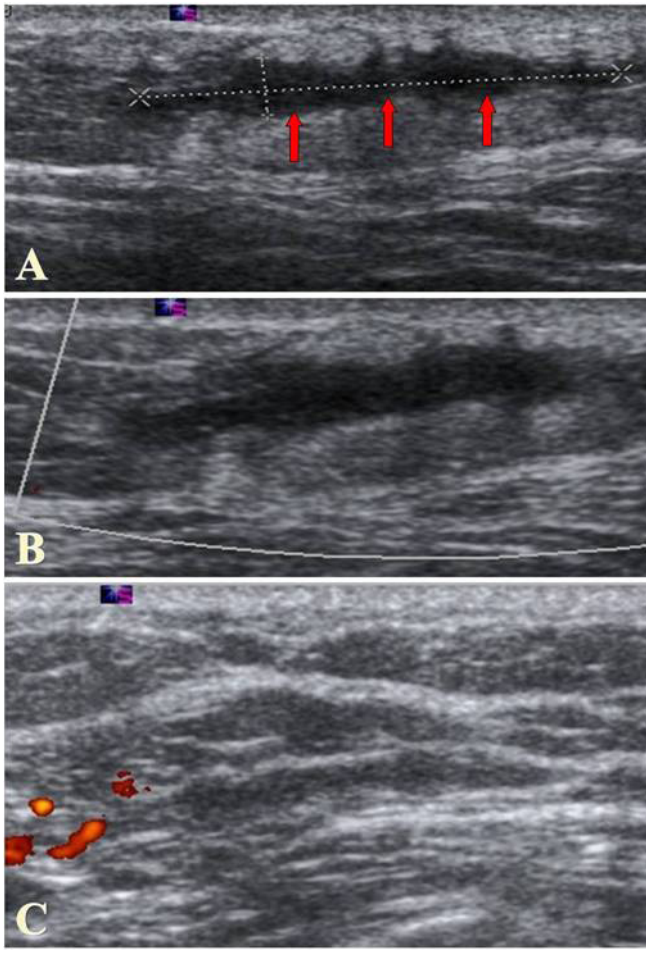

Figure 2: (A) Sonogram reveals a hypoechoeic tubular structure of varying width (arrows) that corresponds to the palpable abnormality and the linear structure or density seen on mammography. (B) Doppler analysis shows absence of flow in this abnormal tubular structure. (C) Sonogram obtained 6 months later shows complete resolution of the abnormality.

monly in the upper outer aspect of the breast. When in a peri-areolar location, a thrombosed vein does not terminate at the areola, unlike a lactiferous duct. Interstitial fluid collections do not have a beaded or tubular appearance like the thrombosed veins seen in patients with Mondor's disease.[1,3] In younger patients, the ultrasound appearance of a superficial hypoechoic tubular structure coupled with the physical findings should suggest the diagnosis of Mondor's disease.[3]

After a mammographic and sonographic work-up has been performed, a Breast Imaging Reporting and Data System (BI-RADS) category three assessment, with a recommendation for a short interval follow-up in six months, is appropriate.[1,9] Patients are usually conservatively treated for pain with anti-inflammatory and analgesic drugs, as Mondor's disease is a benign and self-limiting condition.[1,10] The symptoms of Mondor's disease last only a few weeks; and complete clinical resolution is expected within six weeks. In the absence of other signs of malignancy, biopsy is unnecessary.[3,9] Resolution of the abnormalities should be confirmed clinically and with follow-up mammography and/or ultrasound. [3]

CONCLUSION

Characteristic clinical presentation combined with ultrasound and mammogram findings are useful in diagnosing Mondor's disease. Familiarity with these features combined with a high index of suspicion may prevent undue biopsy, delayed diagnosis and unnecessary treatment.

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