Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Mondor's Disease of Chest Wall: A Case Report

Kai Zhang
Third Affiliated Hospital of Sun Yat-Sen University
Jiannan Xu
SAHSYSU: The Seventh Affiliated Hospital Sun Yat-sen University
Yonghui Wu
Third Affiliated Hospital of Sun Yat-Sen University
Weibin Wu
Third Affiliated Hospital of Sun Yat-Sen University
Jian Zhang (sumszhangjian@163.com)
Third Affiliated Hospital of Sun Yat-Sen University

Case report

Keywords: Monder's disease, chest pain, ultrasound, venous thrombosis

Posted Date: September 14th, 2021

DOI: https://doi.org/10.21203/rs.3.rs-871697/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Abstract

Background: Mondor's disease (MD) is a rare benign and self-limited entity characterized by superficial thrombophlebitis of a vein in special regions. It may be secondary to trauma, malignancy, surgery, excessive physical activity or hyperviscosity. Diagnosis of MD is often based on history and physical examination.

Case presentation: Here we present a rare case of Mondor's disease of chest wall with a pain and subcutaneous cord-like induration of right lateral chest. Ultrasonography revealed a superficial venous thrombosis of right thoracoepigastric vein. After treatment of aspirin for 2 weeks, chest pain was obviously relieved, and the lesion completely resolved approximately 6 weeks after presentation.

Conclusions: Mondor’s disease could spontaneously resolved after several weeks and excessive medical intervention should be avoided.

Background

Mondor's disease tends to occur in middle-age women. Chest pain is the most common reason for seeking medical attention. We present a rare case of Mondor's disease of right lateral chest wall. The aim is to further understand this kind of disease and to characterize the its pathogenesis, diagnosis, treatment and prognosis. When we encounter this disease in clinical work, pain relief and observation are the first choices to avoid excessive medical intervention and unnecessary medical damages.

Case Presentation

A 45-year-old female was admitted to outpatient with a week history of moderate pain and linear induration on his right lateral chest after overextending her right arm. She denied any other symptoms and history of fever, trauma or nipple discharge. But she had a history of strenuous exercise of the upper limbs for 3 years and chronic viral hepatitis B for 10 years without antiviral drug treatment. Physical examination revealed a tender subcutaneous cord beginning from the right anterior axillary fold to the right costal arch with obvious tenderness along the whole length. The appearance of the cord become clear when lifting his right arm above the head (Fig. 1). Doppler ultrasonography showed a non-compressible right thoracoepigastric vein containing abnormal echogenic material, which was consistent with superficial venous thrombosis (Fig. 2). Chest computed tomography (CT) didn’t reveal any evidence of an underlying mass compressing the veins. There was no evidence of associated deep venous thrombosis. She was treated with aspirin (non-steroidal anti-inflammatory drugs, NSAIDs) for 2 weeks, and chest pain was obviously relieved. The lesion completely resolved approximately 6 weeks after presentation and the patient remains without recurrence had during 2 year follow-up.

Discussion

Mondor's disease is a rare and self-limited disease, which was first reported by Fage in 1870[1]. Due to its rarity, this disease is poorly understood. The reported sites are mainly in the anterior thoracic region, and few cases in the axillary region or penis.Studies reported the incidence of Mondor's disease ranged from 0.07–0.96%[2]. Mondor's disease always begins with a sudden onset of pain and a visible tenderness subcutaneous cord[3, 4]. The most common symptom is pain and local tenderness, and the most common sites are mammary region and the anterolateral wall of thorax[2, 5, 6]. Moreover, the affected veins include thoracic lateral vein, superior epigastric vein and the thoracoepigastric vein[7, 8]. The specific pathogenesis of Mondor's disease is still unclear. Some reports have suggested that it may be associated with local trauma, surgery, infections, excessive exercise of the upper limbs[7, 9], cancer or hypercoagulability. A research revealed that MD was associated with primary or metastatic breast cancer[10], but it remains unproven. In view of this patient's history, chronic hepatitis B, as well as excessive exercise of the upper limbs, may be two important causes for MD.

The main pathogenesis of MD is confirmed to be thrombophlebitis, and few is lymphangitis[11]. There are often two stages in the development of Mondor's disease, namely acute inflammatory cell infiltration accompanied by thrombosis in the veins and connective tissue proliferation in the veins resulting in the formation of a hard cord [3, 4, 11]. The diagnosis of MD is usually based on history, physical examination and ultrasound findings. Robert et al.[6]found a high prevalence of active cancer and recent surgery when initially diagnosed with MD. However, imaging examinations, such as ultrasonography or CT examination, should be used to exclude malignancy or other mass compressing the veins [12]. Currently, there is no standard guideline for the treatment of MD. Most authors suggest nonsteroidal anti-inflammatory drugs (NSAIDs) should be the primary treatment. Surgery may be consider when symptomatic treatment is invalid, or in cases of relapsed, and thrombectomy or superficial vein resection may be performed[13]. Antibiotic therapy is not required only when there is proof of infection and systemic anticoagulation is not required, but it can be considered in the acute phase[14].

Due to the lack of enough evidence, the potential risk factors remain speculative. MD is often idiopathic. Symptoms including pain, tenderness and cord-like induration can completely resolve in 4–8 weeks without specific therapy[2]. A recent study revealed that there was no recurrence and a new cancer after treatment during one-year follow-up.

Conclusion

Conservative treatments, including oral NSAIDs and observation, may be the optimal choice for MD patients. The lesion often spontaneously resolved after several weeks and there is no recurrence and a new cancer during follow-up. Therefore, excessive medical intervention should be avoided.

Abbreviations

CT: computed tomography; NSAIDs: nonsteroidal anti-inflammatory drugs; MD: Mondor's disease.

Declarations

Acknowledgements

None.

Authors' contributions

Kai Zhang and Jian Zhang designed the methods, analyzed the data and results, Kai Zhang and Jiannan Xu wrote the manuscript and Ynghui Wu and Webin Wu prepared figures.All authors have read and agreed to the published version of themanuscript.

Funding

None.

Availability of data and materials

All data analyzed during our study are included within the published article.

Competing interests

The authors declare that they have no conflict of interest.

Ethics approval and consent to participate

The study was approved by the Ethics Committee of Third Affiliated Hospital of Sun Yat-sen University. Written patient consent for participation was obtained.

References

1. Fagge CH: **Notes on Some Feigned Cutaneous Affections.** *Br Med J* 1870, **1:**151-152.
2. Amano M, Shimizu T: **Mondor's Disease: A Review of the Literature.** *Intern Med* 2018, **57:**2607-2612.
3. Fietta P, Manganelli P: **[Mondor's diseases. Spectrum of the clinical and pathological features].** *Minerva Med* 2002, **93:**453-456.
4. Bejanga BI: **Mondor's disease: analysis of 30 cases.** *J R Coll Surg Edinb* 1992, **37:**322-324.
5. Cooper RA: **Mondor's disease secondary to intravenous drug abuse.** *Arch Surg* 1990, **125:**807-808.
6. Kreuzpointner R, Johner F, Roth-Zetzsche S, Kucher N, Barco S: **Clinical presentation and long-term follow-up of 45 patients with Mondor disease: A single-center longitudinal study.** *Vasc Med* 2021**:**1358863X211000420.
7. Whitaker-Worth DL, Carlone V, Susser WS, Phelan N, Grant-Kels JM: **Dermatologic diseases of the breast and nipple.** *J Am Acad Dermatol* 2000, **43:**733-751; quiz 752-734.

8. Kikano GE, Caceres VM, Sebas JA: **Superficial thrombophlebitis of the anterior chest wall (Mondor's disease).** *J Fam Pract* 1991, **33:**643-644.
9. Hacker SM: **Axillary string phlebitis in pregnancy: a variant of Mondor's disease.** *J Am Acad Dermatol* 1994, **30:**636-638.
10. Laroche JP, Galanaud J, Labau D, Van Kien AK, Brisot D, Boge G, Quere I: **Mondor's disease: what's new since 1939?** *Thromb Res* 2012, **130 Suppl 1:**S56-58.
11. Ichinose A, Fukunaga A, Terashi H, Nishigori C, Tanemura A, Nakajima T, Akishima-Fukasawa Y, Ishikawa Y, Ishii T: **Objective recognition of vascular lesions in Mondor's disease by immunohistochemistry.** *J Eur Acad Dermatol Venereol* 2008, **22:**168-173.
12. Yanik B, Conkbayir I, Oner O, Hekimoglu B: **Imaging findings in Mondor's disease.** *J Clin Ultrasound* 2003, **31:**103-107.
13. Onder M, Canpolat B, Aksakal B, Gurer MA: **Case of Mondor's disease of the abdomen (body-building induced).** *Int J Dermatol* 2005, **44:**345-346.
14. de Godoy JM, Godoy MF, Batigalia F, Braile DM: **The association of Mondor's disease with protein S deficiency: case report and review of literature.** *J Thromb Thrombolysis* 2002, **13:**187-189.

Figures

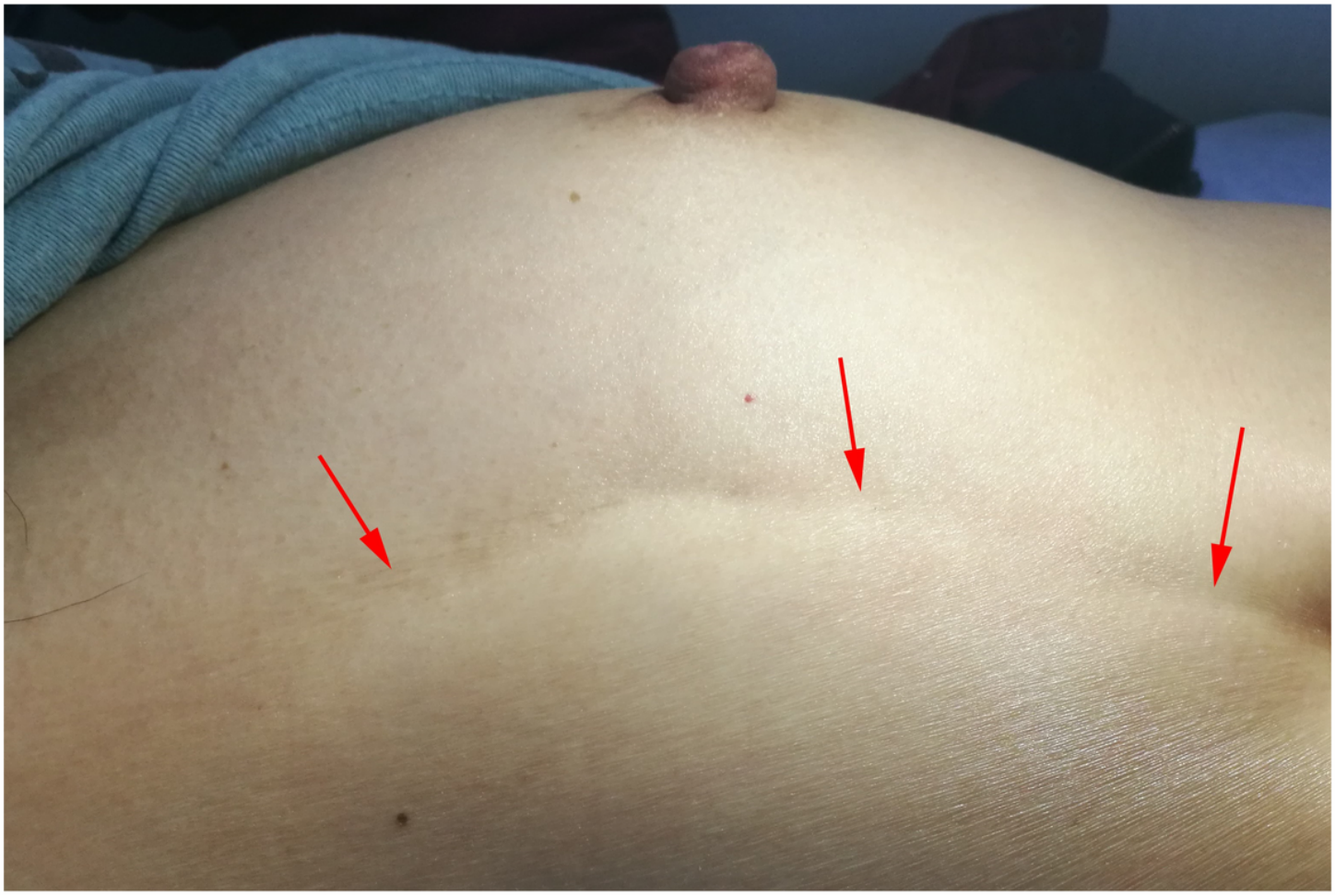

Figure 1

A tender subcutaneous cord of a right thoracic superficial vein.

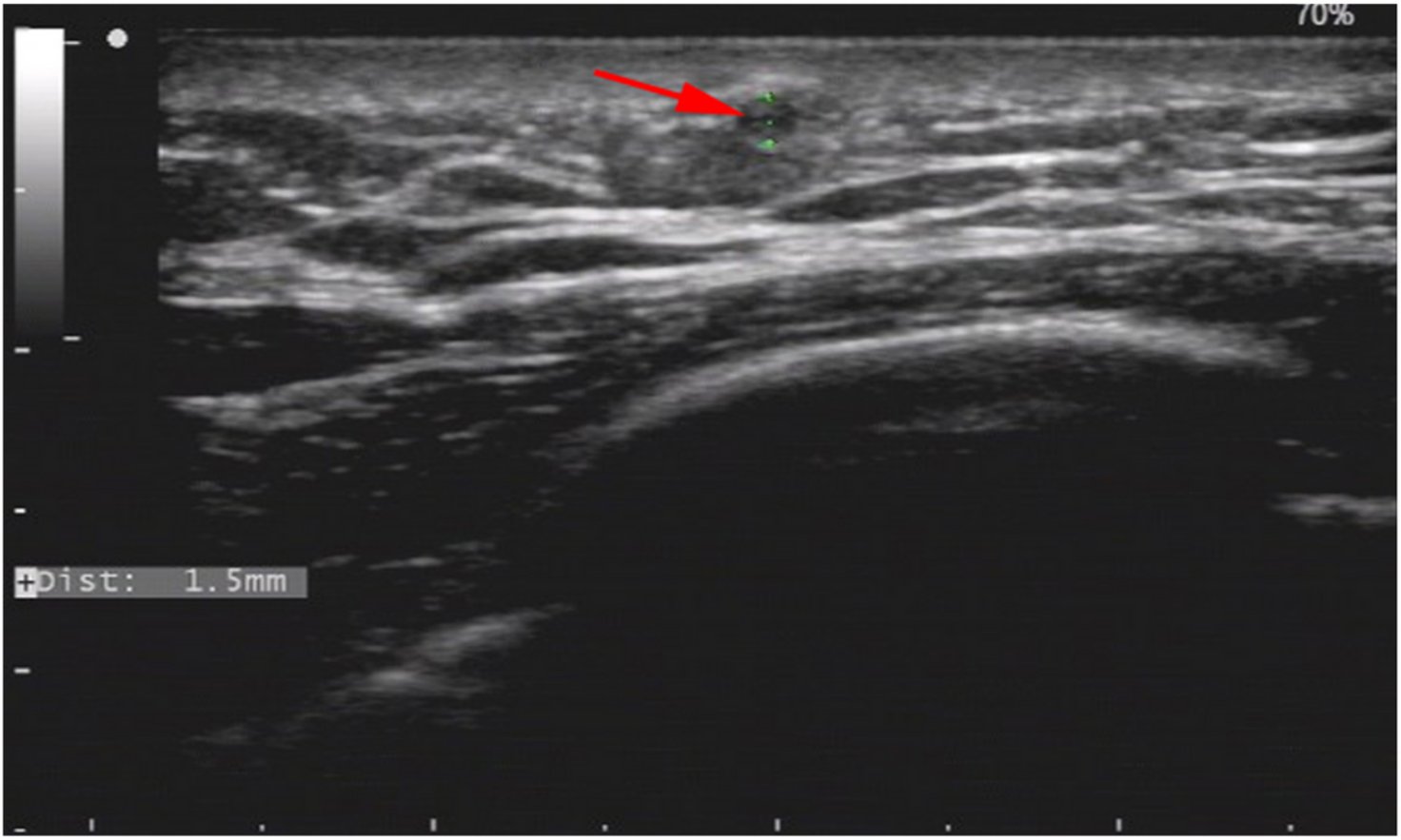

Figure 2

Ultrasound showing a non-compressible superficial venous thrombosis of right thoracoepigastric vein.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- CAREchecklist.pdf