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**MONDOR DISEASE OF PENIS;
A RARE ENTITY MIMICKING PEYRONIE'S DISEASE**

**Penisin Peyronie Hastalığını Taklit Eden Nadir Bir Antite;
Mondor Hastalığı**

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ABSTRACT

Mondor's disease of the penis is a rare entity characterized by thrombosis in the dorsal penile vein. Unlike anxiety resulting from this condition which is conservatively treated, recognizing this disease is quite easy with Doppler ultrasonography. Peyronie's disease and sclerosing lymphangitis are considered in the differential diagnosis of Mondor's disease. In this present case report we aimed to present ultrasonography findings and briefly review the literature in a male patient diagnosed with Mondor's disease who admitted with rope like stiffness on the dorsal side of penis mimicking Peyronie's disease.

Key words: Penile Mondor's disease, superficial dorsal penile vein, thrombosis, Doppler ultrasound.

ÖZET

Penisin Mondor hastalığı, süperfisial dorsal penil vende tromboz ile karakterize nadir bir antitedir. Hastalarda oluşturduğu kaygıya kıyasla konservatif tedavi ile tedavi edilebilen bu hastalığı Doppler ultrasonografi ile tanımak oldukça kolaydır. Peyronie hastalığı ve sklerozan lenfanjit Mondor hastalığının ayırıcı tanısında yer almaktadır. Bu vaka sunumundaki amacımız penisin dorsal kesiminde ip şeklinde ele gelen sertlik ile başvuran, klinik olarak Peyronie hastalığını taklit eden Mondor hastalığı tanısı konmuş bir erkek olgunun ultrasonografi bulgularını sunmak ve özetle literatürü gözden geçirmektir.

Anahtar Kelimeler: Penisin Mondor hastalığı, süperfisyal dorsal penil ven, tromboz, Doppler ultrason.

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INTRODUCTION

Mondor disease of penis is a rare disorder characterized by rope shaped induration on the dorsal aspect of penis, resulting from superficial dorsal penile vein thrombosis. Superficial vein thrombosis was first defined by Mondor in 1939 as anterior thoracoabdominal superficial vein thrombosis of subcutaneous adipose tissue (1). Braun and Falco identified first penile involvement in 1955 (2). It was in 1958 when Helm and Hodge have first published isolated penile vein thrombosis (3). Unlike anxiety resulting from this condition which is conservatively treated, recognizing this disease is very easy with Doppler ultrasonography. In this case presentation we aimed to underline the effectiveness of gray scale and Doppler ultrasound findings in a patient diagnosed with penile Mondor's disease which mimics Peyronie's disease clinically.

CASE REPORT

A 46 year old male referred to urology department with a rope like palpable swelling on the dorsal surface of the penis and tenderness in the same area with a history started two weeks before. During physical examination a cord-like swelling in the dorsal part of the penis was detected. He has described no hyperemia or itching and no history of burning during urination, discharge or frequent urination. The patient defined neither excessive sexual activity nor penile trauma. The complete blood count (CBC), biochemistry and coagulation tests were in normal limits. Presumptive diagnosis of Peyronie's disease was made and he was referred to radiology department for ultrasound evaluation. His written consent was obtained before ultrasonographic evaluation.

The penis was evaluated with of gray-scale and Doppler ultrasonography from dorsal and ventral

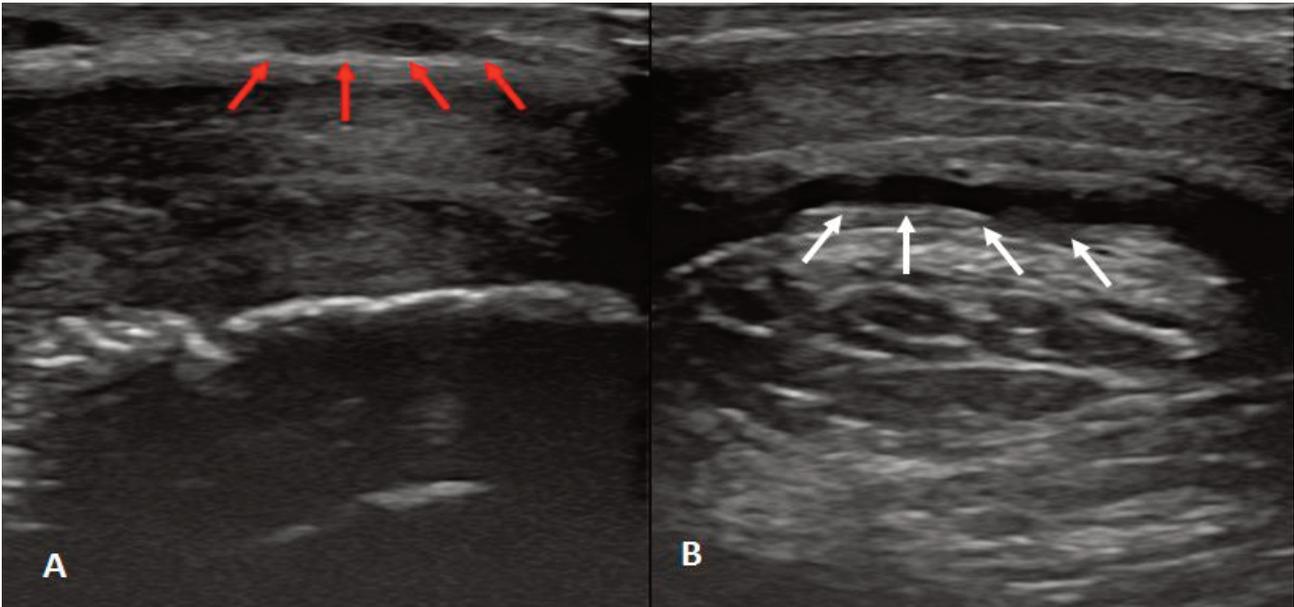


Figure 1. Sagittal penile ultrasonography from the dorsal side (a) superficial dorsal vein thrombus with high echogenicity is seen in the root of the penis (red arrows). Sagittal ultrasonography from the ventral surface (b) demonstrates anechoic thrombosis (white arrows).

surface. Sonographic examination was performed with a 11L linear transducer, with a bandwidth frequency ranging between 7-12 Megahertz (MHz), connected to an ultrasound machine Logiq P5 (GE Healthcare, Wisconsin, USA). During gray-scale ultrasonographic evaluation echogenic and anechoic thrombosis were detected in superficial dorsal penile vein on the dorsal aspect of the penis (Fig 1a and 1b). Doppler ultrasonographic examination confirmed this structure as thrombosed superficial dorsal penile vein and no venous blood flow was observed along the trace of relevant vein (Fig 2a and 2b). No calcified or fibrous plaques were detected supporting Peyronie's disease in the patient during sonographic evaluation. Based on gray-scale and Doppler ultrasonographic results the diagnosis of Mondor's disease was made. The patient was discharged with the advice of refraining from sexual intercourse for a while, prescribed anti-inflammatory drug (diclofenac sodium tablet 50 mg 2x1). After four weeks of treatment a significant reduction in clinical signs was observed during control.

DISCUSSION

Mondor disease of the penis is a rare entity with the incidence rate of 1.39% (4). The disease usually affects individuals between 21-70 years (5). In this self-limiting disease patients often present with painful, palpable cord-like hardness in the dorsal aspect of the penis. Increased sexual activity or long-term sexual abstinence, penile trauma during sexual intercourse, infections, constrictive elements used during sexual practice that block venous flow, venous obstruction secondary to bladder distension, pelvic tumors and disseminated pancreatic adenocarcinoma are considered in the etiology of Mondor's disease (6, 7). Among these possible etiologic factors, the most common is penile trauma experienced during sexual activity (8).

Virchow triad is the valid etiology of venous thrombosis. Endothelial damage, venous stasis and hypercoagulability as in all venous system may lead to thrombosis in superficial dorsal

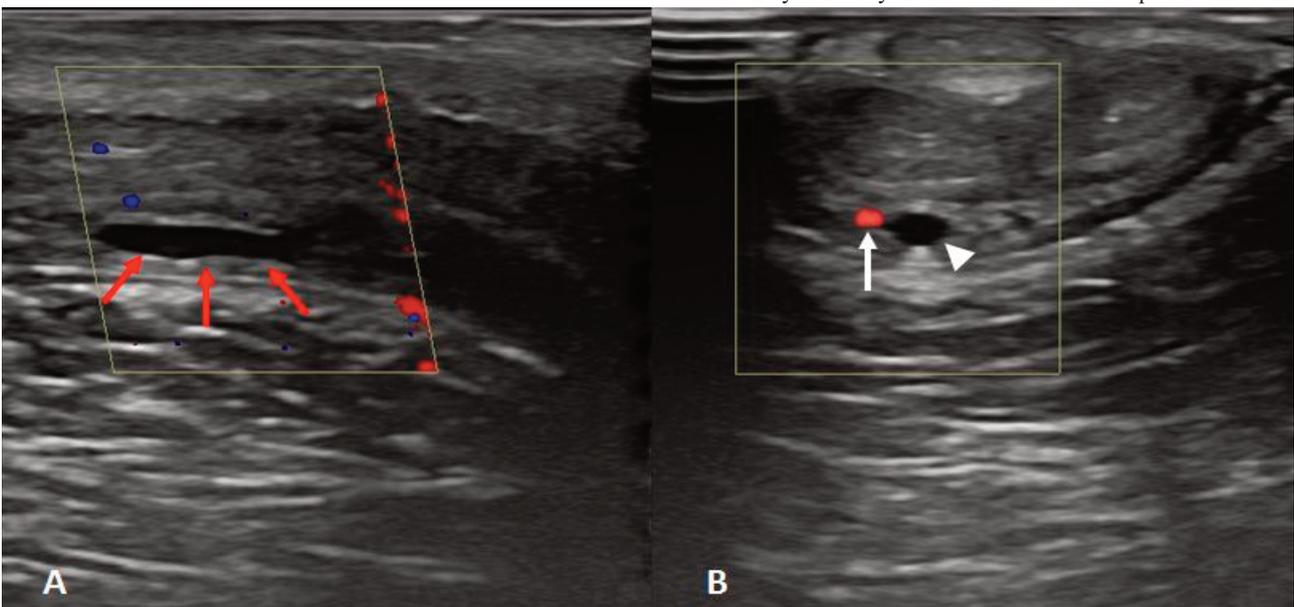


Figure 2. Sagittal doppler ultrasonography from the ventral side (a) no venous flow is observed in superficial dorsal penile vein compatible with total thrombosis (red arrows). Transverse doppler sonography (b) of the same region. While normal arterial flow is observed in dorsal penile artery (white arrows), no venous flow is detected in accompanying vein (white arrowhead).

penile vein too. In the literature, Mondor's disease after prolonged flights have been described (9), additionally in a study conducted by Conkbayir et al. in 2010 (10), a 49 year old male with superficial dorsal penile vein thrombosis had been presented. The occupation of the patient was bus driver. In our case no story of penile trauma or excessive sexual activity had been described, however the occupation of the case (public officer) that supports physical inactivity and venous stasis may be an explanation of venous thrombosis. Regarding normal complete blood count test, the normal amount of protein C-S and antithrombin 3 levels, coagulopathy induced Mondor's disease was ruled out.

Clinical findings are often sufficient to make the diagnosis of Mondor's disease however; Doppler examination is valuable in terms of demonstrating thrombosed superficial dorsal penile vein, restoration of blood flow during and after treatment and also useful tool for showing recanalization in the relevant vein (11, 12). Magnetic resonance imaging is an alternative imaging method which can be used in patients with difficulty in diagnosis (13).

Treatment is essentially conservative. Several methods of treatment have been proposed for penile Mondor's disease. Antibiotics can be used prophylactically. Non steroidal anti inflammatory drugs (NSAIDs) can be used for pain relief, as well as for their inflammatory action. Patients should also be informed about the avoidance of sexual intercourse or masturbation for a while. Anticoagulation with aspirin, heparin, or other antiplatelet agents is not essential to prevent additional thrombosis (8). One month after the treatment we have observed regression in the patient's thrombosis.

Peyronie's disease and sclerosing lymphangitis are considered in the differential diagnosis of Mondor's disease. While Peyronie plaques are often observed as well defined fibrotic lesions that may demonstrate calcification in the tunica albuginea, sclerosing lymphangitis of the penis is characterized with thickened large serpiginous lymphatic channels. These two pathologies are easily distinguished from Mondor's disease with demonstration of normal superficial dorsal penile vein flow with Doppler ultrasonography.

In conclusion; Mondor disease of penis is a self-limiting benign entity resulting from superficial dorsal penile vein thrombosis. Considering the benefits such as low cost, no risk of radiation and easy accessibility, Doppler ultrasonography should be the first modality of imaging technique in diagnosis and treatment response.

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KAYNAKLAR

- Mondor H, Tronculite Sons. Cutanee de la parvi thoraciqueantero-lateral. Mem Acad Chir. 1939;65:1275-1278.
- Braun-Falco O. Clinical manifestations, histology and pathogenesis of the cordlike superficial phlebitis forms Dermatol Wochenschr. 1955;132:705-715.
- Helm JD Jr, Hodge IG. Thrombophlebitis of a dorsal vein of the penis: report of a case treated by phenylbutazone. J Urol. 1958;79:306-307.
- Kumar B, Narang T, Radotra BD, Gupta S. Mondor's disease of penis: a forgotten disease. Sex Transm Infect. 2005;81:480-482.
- Nazir SS, Khan M. Thrombosis of the dorsal vein of the penis (Mondor's disease): A case report and review of the literature. Indian J Urol. 2010;26:431-433.
- Horn AS, Pecora A, Chiesa JC, Alloy A. Penile thrombophlebitis as a persistent manifestation of pancreatic carcinoma. Am J Gastroenterol. 1985;80:463.
- Bennet RG, Leyden JJ, Dechard JW. The heroin ulcer. New addition to the differential diagnosis of ulcers of the penis. Arch Dermatol. 1973;107:121-122.
- Singla K, Sharma AK, Viswaroop SB, Gopalakrishnan G, Vedanayagam S. Mondor's Disease of the Penis: A Forgotten Entity. UroToday Int J. 2012 Feb;5(1):art 87.
- Day S, Bingham JS. Mondor's disease of the penis following a long-haul flight. Int J STD AIDS. 2005;16:510-511.
- Conkbayir I, Yanik B, Keyik B, Hekimoglu B. Superficial dorsal penile vein thrombosis(Mondor disease of the penis) involving the superficial external pudental vein: color Doppler sonographic findings. J Ultrasound Med. 2010; 29:1243-1245.
- Sasso F, Gulino G, Basar M, Carbone A, Torricelli P, Alcini E. Penile Mondor's disease: an underestimated pathology. Br J Urol. 1996;77:729-732.
- Shapiro RS. Superficial dorsal penile vein thrombosis (penile Mondor's phlebitis): ultrasound diagnosis. J Clin Ultrasound. 1996;24:272-274.
- Boscolo-Berto R, Iafrate M, Casarrubea G, Ficarra V. Magnetic resonance angiography findings of penile Mondor's disease. J Magn Reson Imaging. 2009; 30:407-410.