

Inflammation and Infection

The Damage of Penile Doppler Ultrasonography in Diagnosis of Penile Mondor's Disease: A Report of Two Cases

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ARTICLE INFO

Article history:

Received 22 December 2014

Accepted 23 December 2014

Available online 17 January 2015

Keywords:

Penile induration

Priapism

Sexual behavior

ABSTRACT

Penile Mondor's disease is a thrombophlebitis of the superficial dorsal vein of the penis. It is a rare clinical diagnosis and generally resolves spontaneously. A simple physical examination is sufficient for diagnosis but color Doppler ultrasonography is often carried out as a further investigation. We describe two patients who developed priapism due to penile Doppler ultrasonography which was used for diagnosis of these patients. Now, in our opinion this examination was unnecessary.

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Introduction

Penile Mondor's disease is a thrombophlebitis of the superficial dorsal vein of the penis. It is a rare clinical diagnosis. Penile Mondor's disease is diagnosed and treated easily but when reviewing the literature is considered that unnecessary tests are carried out for diagnosis.

Case reports

About 3 week intervals with the same complaints 34 and 40 year old two patients were admitted to the emergency department and urology clinic. Both patients had complained of swelling on the dorsum of penis. There were no other complaints. None of the patients had specific anamnesis before the development superficial thrombosis of the penis. On physical examination, both patients presented subcutaneous spermatic cord-like indurations on the dorsal penile surface.

In the two patients for diagnosis was performed advanced examination using diagnostic color Doppler ultrasonography with an intracavernosal vasoactive agent (60 mg papaverine hydrochloride) after obtaining their informed consent. In these patients the sonographic findings were similar, including an increase in the diameter of superficial dorsal vein, noncompressibility and thrombus in the superficial dorsal vein (Fig. 1). In this vein the venous current spectrum was not observed via color Doppler

examination. Following intracavernosal vasoactive agent administration Doppler sonography did not show any disorder in the cavernosal arteries (Table 1).

Both of these patients priapism developed after Doppler sonography. Patients were treated by applying corpus cavernosum drainage with a 21 gauge butterfly needle without any problems when an erection maintained 6 hours after procedure. Both patients healed completely within 3 weeks who were invited to the weekly follow-up.

Discussion

Penile Mondor's disease is a benign vascular condition. It is spontaneously remedied. Patients complain of a generally painful or painless cord-like indurations on the dorsal and dorsolateral aspect of the penis. Prolonged and vigorous sexual intercourse, penile trauma, infection, constrictive elements used during certain sexual practices and pelvic tumors have been reported in etiology of penile Mondor's disease but it is not completely understood. Prolonged sexual intercourse is state as most common cause in the literature.^{1,2} When investigated the literature, it is clear that Doppler ultrasonography is often carried out for diagnosis as a further investigation with or without an intracavernosal vasoactive agent.^{3–9} We carried out this examination in our patients. Doppler sonography did not show any disorder in the cavernosal arteries. Moreover priapism developed in these patients. Although the priapism was corrected with proper treatment we decided that Doppler ultrasonography was an unnecessary examination in these patients. When considering the possible consequences of priapism

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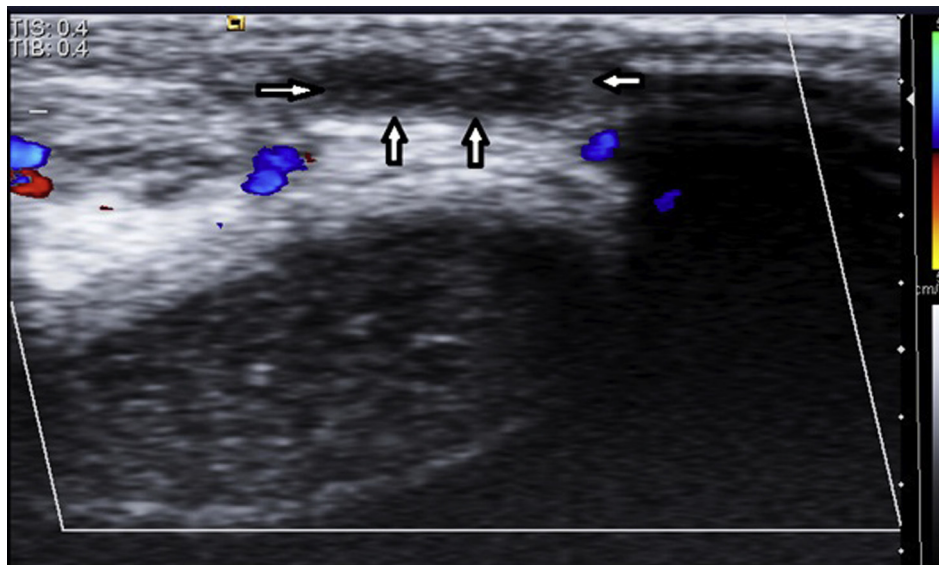


Figure 1. Color Doppler ultrasound showing thrombosis of the superficial dorsal vein of the penis (arrows). When there was current flow in the other veins of the penis, this was not monitored in the superficial dorsal vein.

Table 1

The patients' Doppler sonography results with application of an intracavernosal agent

Patients	Mean cavernosal artery diameters (mm)	Peak systolic volume on the right (cm/sec)	Peak systolic volume on the left (cm/sec)	End diastolic volume on the right (cm/sec)	End diastolic volume on the left (cm/sec)
1	0.7	47	49	−3	−2
2	0.6	34	32	−5	−2

we think that it is a much more serious condition than penile Mondor's disease.

Penile Mondor's disease is easily recognizable from medical history and physical examination. We do not consider that additional examination is required. It resolves with conservative treatment or spontaneously. However the diagnosis is important because the disease may create fear in patients.

Conflict of interest

None.

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