

## Medically refractory Mondor's disease of the penis

Hugo Rivera-Astorga<sup>1\*</sup>, María P. Vázquez-Tabares<sup>1</sup>, Paulina L. León-López<sup>1</sup>, Ángel Gurrola-Ortega<sup>1</sup>,  
Jorge Jaspersen-Gastelum<sup>1</sup>, José F. Virgen-Gutiérrez<sup>1</sup>, Eloy Rico-Frontana<sup>1</sup>, and César A. Rivera-Colín<sup>2</sup>

<sup>1</sup>Urology Service, Hospital General de México Dr. Eduardo Liceaga, Secretaría de Salud; <sup>2</sup>Department of Reconstructive Urology, Faculty of Medicine, Universidad Nacional Autónoma de México. Mexico City, Mexico

### Abstract

The case involves a 24-year-old male diagnosed with Mondor's disease, with a duration of 3 months and resistance to anti-inflammatory pharmacological treatment. The decision is made to pursue surgical management through the resection of the dorsal vein of the penis. Mondor's disease typically exhibits self-limiting characteristics. Surgical intervention is considered when the patient proves resistant to conservative treatment after 8 weeks. It is essential to opt for a minimally invasive surgical approach to mitigate complications such as fibrosis or erectile pain, thereby enhancing the patient's quality of life.

**Keywords:** Mondor's disease. Treatment-resistant. Surgical intervention.

### Introduction

Mondor's disease is defined as thrombophlebitis of the superficial veins of the dorsum of the penis<sup>1</sup>. Braun-Falco first reported isolated phlebitis in the dorsal vein of the penis in 1858<sup>2</sup>, but the disease is named after Henri Mondor, a French surgeon responsible for describing a series of cases of thoracoepigastric vein thrombosis in female patients in 1939<sup>3,4</sup>.

It manifests acutely as a subcutaneous indurated band that generates regional pain and episodic palpitations<sup>5</sup>; it is generally self-limiting in a range of 4-8 weeks<sup>6</sup>. It is an uncommon condition, with unknown pathophysiology, although there are hypotheses that indicate that the most common etiology is inflammation of the venous drainage of the penis together with Virchow's triad secondary to surgeries in the region, genital trauma, neoplasms, excessive exercise<sup>7</sup> blood stasis due to prolonged erection, vigorous sexual activity, bladder overdistension, and use of PDE inhibitors<sup>5,6</sup>.

It affects sexually active men between 18 and 70 years of age, its incidence is 1.39% in a population between 20 and 40 years of age<sup>8</sup>; although it is believed to be higher, it is underdiagnosed because patients do not seek medical attention due to stigma<sup>9</sup>. The diagnosis is clinical, confirmed with Doppler ultrasound, where the main finding is the thrombosed vein in grayscale with the absence of flow; magnetic resonance angiography is also an option to confirm the diagnosis, as the venous network of the dorsum of the penis is dilated<sup>10,11</sup>.

Treatment aims to control pain and reduce inflammation; non-steroidal anti-inflammatory drugs are widely used<sup>1</sup>. In addition to sexual abstinence, anticoagulant drugs, such as heparin, may be given in the acute phase of the disease<sup>6</sup>.

### Case report

A 24-year-old male patient with a history of epilepsy was treated with magnesium valproate and the rest of

#### \*Correspondence:

Hugo Rivera-Astorga

E-mail: hugolch\_9@hotmail.com

Date of reception: 08-01-2024

Date of acceptance: 16-04-2024

DOI: 10.24875/HGMX.24000003

Available online: 01-04-2025

Rev Med Hosp Gen Mex. 2025;88(2):96-98

www.hospitalgeneral.mx

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**Figure 1.** Stone band and curling on the back of the penis, shows fibrosis on the back of the penis one from the base.



**Figure 2.** Stone band and curling on the back of the penis, showing the total length from the base to the balanopreputial groove.

the history was denied. For 3 months before his evaluation, he has had localized pain in the dorsum of the penis that is exacerbated by morning erections and at the time of urination due to the manipulation of the penis, sexual abstinence in this period due to pain.

She received previous treatment with antiplatelet and phlebotonics without any improvement, in addition to non-steroidal anti-inflammatory drugs without response; physical examination reveals stony and rosy tissue, which runs from the base of the penis and continues along the entire dorsum of the penis to the balanopreputial sulcus (Figs. 1 and 2). Resection of the superficial vein of the dorsum of the penis was performed with histopathological findings of thrombophlebitis, vein fragments with thrombi in the recanalization phase and fibrosis of the intima and hypertrophy of the muscle; and focally infiltrate chronic inflammatory lymphocyte in the intima and tunica media (Figs. 3 and 4).

## Discussion

The cases reported in the literature found a benign condition as the most frequent cause of superficial thrombosis of the dorsal vein of the penis<sup>12</sup>, the risk factor associated with the patient was vigorous sexual activity. Conservative medical treatment is the first option, consisting of sexual abstinence, pain relief, and control of inflammation with non-steroidal anti-inflammatory drugs; in addition, the improvement of circulation, only in the case of patients with underlying hypercoagulability problems with phlebotonics and anticoagulant. However, when thrombophlebitis persists for more than 8 weeks due to failure in first-line management, surgical correction based on resection of the superficial vein of the penis is resorted to.

In the reported case, a proximal and distal approach was performed, a procedure similar to performing a



**Figure 3.** Proximal incision of the surgical approach.

saphenectomy, with the aim of performing a minimally invasive surgery that does not compromise the patient's sexual functioning and performance due to complications such as pain in erection and fibrosis of the penis. In 2009, Salmon et al.<sup>13</sup> proposed a non-invasive technique to solve Mondor's disease, manual axial distraction, which provides patients with a fast, effective solution without adverse effects; it consists of applying firm pressure with distraction to several points of the thrombosed vein until the tension is overcome.

Prognosis depends on the underlying disease that led to dorsal penile vein thrombophlebitis; a report by Özkan in 2015 with 30 patients resolved with medical treatment reported that no permanent deformity of the penis or erectile dysfunction was found during the follow-up of the cases. Our patient had a satisfactory evolution with morning erections and the beginning of sexual life at 6 weeks.

## Conclusion

It is a rare condition that is usually self-limiting and only requires pharmacological treatment. The choice of



**Figure 4.** Proximal incision of the surgical approach.

surgical treatment is made when the patient is resistant to conservative treatment after 8 weeks; surgical management should be less invasive to avoid complications such as fibrosis or erection pain and consequently improve the patient's quality of life.

## Funding

The authors declare that the work was funded by the Hospital General de México and the Urology Service.

## Conflicts of interest

The authors declare no conflicts of interest.

## Ethical considerations

**Protection of humans and animals.** The authors declare that no experiments involving humans or animals were conducted for this research.

**Confidentiality, informed consent, and ethical approval.** The authors have followed their institution's confidentiality protocols, obtained informed consent from patients, and received approval from the Ethics Committee. The SAGER guidelines were followed according to the nature of the study.

**Declaration on the use of artificial intelligence.** The authors declare that no generative artificial intelligence was used in the writing of this manuscript.

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