

# Partial segmental thrombosis of the corpus cavernosum

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## KEY WORDS

partial priapism ▶ thrombosis ▶ corpus cavernosum

## ABSTRACT

The case of a 32-year-old man with perineal pain and local swelling is presented. Partial segmental thrombosis of the *corpus cavernosum* was diagnosed and treated conservatively with systemic anticoagulants. Conservative management proved to be a safe and successful therapeutic option in partial thrombosis of the *corpus cavernosum*.

## INTRODUCTION

Partial thrombosis of the *corpus cavernosum* is a rare condition. In literature it is known also as a partial priapism. It is characterized by thrombosis of the proximal segment of one *corpus cavernosum*. We report on a patient suffering from this disease that was successfully treated conservatively.

## CASE REPORT

A 32-years old man was referred to the Department of Urology with perineal pain with local swelling lasting since two weeks. He reported that the perineal pain occurred after sexual arousal without sexual intercourse. Outpatient treatment with antibiotics proved to be unsuccessful. Patient history revealed no dysuria, trauma, or urethral discharge. Erections were still present though painful. The patient's prior medical history included no chronic illnesses. On physical examination the pendulous part of the penis had a normal appearance without rigidity or inflammation. Both distal corpora and glans were flaccid. The 8-cm long, firm, fixed, and painful mass was palpated at the level of the proximal right *corpus cavernosum*. Apart from slightly elevated white blood cells count, the full blood count, CRP, electrolytes, INR, APTT, and urinalysis were within normal range. Perineal ultrasound scan (color-coded duplex sonography) confirmed the presence of the 8-cm long mass in the right posterior cavernous body with the absence of blood flow inside (Fig. 1). No evidence of rupture of the *tunica albuginea* was found. No further abnormalities were noted.

The partial thrombosis of the right *corpus cavernosum* was diagnosed. The patient was not hospitalized.

We decided to treat the patient conservatively with 15,000 IU of dalteparin daily, given subcutaneously. Follow-up outpatient visits were scheduled – first after two weeks, then monthly, each time medical history and physical examination was done. On the first visit, the patient reported an improvement of perineal pain with scrotal swelling still present. Total disappearance of the right

perineal mass, both at physical examination and ultrasound scan was observed after 3 months of treatment, since then he was symptom free. The patient reported normal erections at the end of treatment. Follow-up revealed no abnormalities after consultation by an internist and a haematologist.

## DISCUSSION

The first case of partial priapism was described by Hillis [1]. All cases described in literature were presented with painful, unilateral, perineal mass. The cause of this disease remains unclear. In cases operated on, a thin membrane was found that separated the erect from flaccid part of the *corpus cavernosum* [1, 2, 3]. The origin of this fibrous septum is unknown. Hillis suggested that it represents innate web predisposing to develop the thrombus [1]. Other authors implied the post-traumatic development of this fibrous septum, holding the blood inside the separated part of the *corpus cavernosum* [2]. This theory is backed by cases where thrombosis was related to trauma with the history of sexual intercourse or cycling [2, 4, 5]. But, in the majority of cases, patients reported no trauma before onset of symptoms, as it was in our case. The etiology of the presented case was unclear and therefore must be considered idiopathic [6].

The diagnosis of the described case was made with the help of a perineal ultrasound scan showing tumescence of the right posterior cavernous body without visible blood flow. There are various methods for diagnosing the illness cited in the literature i.e. angiography, cavernosography, biopsy of the *corpus cavernosum*, CT, MRI, and color-coded duplex sonography [3, 5, 7]. We suggest that since the MRI and ultrasonography can establish the final diagnosis, invasive diagnostic methods should be avoided.

Several treatment options have been proposed, and include: surgical corporotomy, cavernosum-spongiosum shunt, and intracavernous injection of etilefrine [5, 8, 9]. We agree with others that



Fig. 1. Ultrasound scan showing a thrombus in the right posterior cavernous body.

since all patients treated conservatively with systemic anticoagulants maintained erectile function, operative treatment should be implemented only in selected cases [3, 4, 6, 10]. The conservative treatment with dalteparin bears the risk of low molecular weight heparin induced priapism due to heparin-induced thrombocytopenia (HIT). Though probability of HIT in case of dalteparin is low, that would be the case where surgical intervention is advocated [11].

Although partial priapism is the commonly used term to characterize this unusual clinical condition, we agree with D. C. Horger that phrase „partial segmental thrombosis of the corpus cavernosum" describes this clinical entity in a better way [8].

## CONCLUSION

Partial segmental thrombosis of the *corpus cavernosum* is unusual clinical condition. Conservative management of this disease is advocated.

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