CASE REPORT

Isolated Superficial Dorsal Penile Vein Thrombosis due to Scabies Infestation

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ABSTRACT

Thrombosis or thrombophlebitis of the superficial dorsal vein of the penis is called penile Mondor's disease. Although many factors are suggested as the etiology, but it has not been clarified yet. Hypersensitivity reactions may predispose to this complication in some patients; and it results from the formation of antigen-antibody immune complexes in the circulation as a consequence of the penetration of antigenic debris into the circulation due to pruritus-related excoriations caused by parasitic infestations like scabies. Herein, we present a case of isolated superficial dorsal penile vein thrombosis developing due to scabies infestation without any additional thrombogenic factors. Conservative approach and medical treatment were sufficient in the successful treatment of scabietic penile Mondor's disease.

Key Words: *Mondor's disease, Penis, Scabies.*

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INTRODUCTION

Thrombosis or thrombophlebitis of the superficial dorsal vein of the penis is called penile Mondor's disease and is a rare occurrence. Usually, it manifests as pain and discomfort marked with an erection in sexually active, 21 to 70-year-old-men.[1] Although its etiology is not known clearly, cases due to enteroviral infections, tuberculosis, excessive sexual activity, trauma, surgical procedures of the genital system, sickle cell anemia, urinary bladder, prostate carcinoma, and idiopathic conditions are reported in various studies.[1-3]

Although vasculitis is more commonly associated with *streptococcal* infections, it is known that parasitic infestations may rarely cause the development of vasculitis.[4] The association between scabies infestation and vasculitis is uncommon, but it seems it may not be coincidental since nine cases have been reported in the literature.[4-6] Herein, we present a case of isolated superficial dorsal penile vein thrombosis developing due to scabies infestation without any additional thrombogenic factor. To the best of our knowledge, this is the first case in the literature.

CASE REPORT

A 34-year male patient married for 7 years presented to our outpatient clinic with a complaint of induration at the right side of the radix penis, beginning 3 weeks ago, and pain occurring especially during erection. It was learnt from his medical history that he received topical treatment for the diagnosis of scabies 4 weeks ago. There was no concomitant disease, pelvic malignancies, chronic drug/substance use, surgical intervention, sexual over activity and use of vacuum pump in his background. On physical examination, a wormlike induration approximately 5 cm in length and 0.5 cm in width beginning from the dorsal side of the radix penis and extending to the corona of glans penis was palpated (Figure 1).

Vital signs and laboratory investigations of the patient were within normal limits. The coagulation profile of the patient was normal. Penile ultrasonography was performed. Diameter of superficial dorsal vein of the penis was 6.3 mm. Irregular, hyperechogenic, non-

Figure 1: A wormlike induration beginning from the dorsal side of the radix penis and extending to the corona of glans penis.

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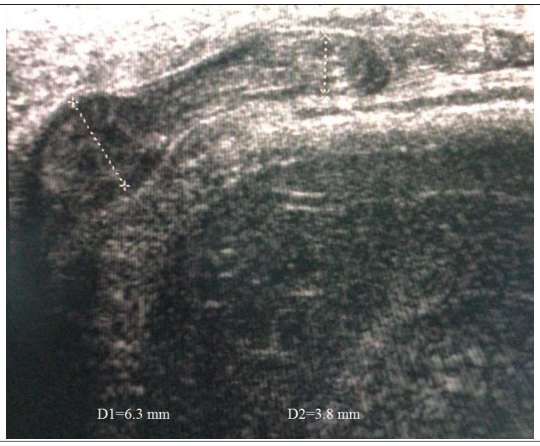

Figure 2: Irregular, hyperechogenic, non-compressible large thrombus appearance in the superficial dorsal vein of the penis.

compressible large thrombus was observed in the superficial dorsal vein of the penis (Figure 2). These findings were interpreted in favour of venous thrombosis. Treatments were initiated with oral cefuroxime axetil, 750 mg tablet, twice daily, topical chondroitin polysulfate cream, three times daily and oral acetylsalicylic acid, 300 mg tablet once daily. He was recommended to refrain from sexual activity. After 3 weeks of treatment, a control penile ultrasonography was performed. Thrombosis was observed to be regressed. After a 12-week follow-up, complaints of the patient regressed completely. No recurrence was observed.

DISCUSSION

Cutaneous and subcutaneous venous return of the penis occurs through one or two superficial dorsal veins and saphenous vein. Predisposition to a hyper-coagulable state due to damage to vessel wall integrity, changes in blood flow, and changes in the blood components are the classical leading mechanisms of occurrence of thrombosis. The pathogenic hypothesis of scabietic vasculitis is based upon a humoral hyper-sensitivity reaction. This reaction involves the formation of circulating antigen-antibody immune complexes following the penetration of antigenic debris into the bloodstream, as a result of excoriations due to pruritus.[7]

The thrombosed vein palpated on the dorsal side of the penis and felt along the penis (a firm, cord-like lesion on the dorsal aspect of penis) at physical examination is diagnostic. But definite diagnosis should be verified with ultrasonography or colour Doppler ultrasonography.[8] The thrombosed venous segment is observed in ultrasonography as a tubular structure not giving flow signal and not compressing or poorly compressing. In addition, regression of thrombosis and the presence of normal penile blood flow during follow-up on ultrasound further supports the diagnosis. Here, the use of an intracavernosal vasoactive agent during colour Doppler ultrasonography is controversial. It is thought that the use of an intracavernosal vasoactive agent with serious complication risks, like priapism, is not necessary for a benign disease like penile Mondor's disease.[9] Unless differential diagnoses such as Peyronie's disease or sclerosing lymphangitis are eliminated, magnetic resonance imaging (MRI) can also be used.[9] In our case, the diagnosis was suspected on physical examination. A definite diagnosis was made with ultrasonography performed without the use of an intracavernosal vasoactive agent. Additional imaging was found unnecessary.

Treatment of penile Mondor's disease is usually conservative; and refraining from sexual activity is recommended until the symptoms are resolved. Symptoms typically resolve within 6 to 8 weeks. Acetylsalicylic acid and oral anticoagulant agents are frequently used in medical treatment. Moreover, creams including heparin or fibrinolytic mucopolysaccharide polysulfate can be used topically. Kartsaklis *et al.* used oral treatment with 8 mg lornoxicam tablet, 325 mg acetylsalicylic acid, 500 mg, cefuroxime and local dressing with an ointment containing heparin.[10] In the study performed by Al-Mwalad *et al.,* including 25 patients, it was reported that only 2 patients did not respond to conservative therapy. Therefore, thrombectomy was performed in them.[8] Treatments were used with oral cefuroxime axetil 750 mg tablet twice daily, topical chondroitin polysulfate cream three times daily, and oral acetylsalicylic acid 300 mg tablet once daily together with sexual abstinence. No side effect was observed. Three weeks of treatment was adequate. No recurrence was observed after a 12-week follow-up.

With the absence of any concomitant disease, pelvic malignancies, chronic drug/substance use, surgical intervention, sexual over activity, using of vacuum pump and other thrombogenic factors, and the development of thrombosis immediately after diagnosis of scabies and complete regression of symptoms associated with thrombosis after treatment, we thought that this condition possibly developed based upon scabietic vasculitis as a result of hypersensitivity reaction to humoral mediators.

Penile Mondor's disease is a rare genital disease. Although many factors are suggested as the etiology, it has not been clarified yet. We think that parasitic infestations like scabies may predispose to vasculitis and/or thrombosis by causing hypersensitivity reactions. Hypersensitivity reactions may include the formation of antigen-antibody immune complexes in the circulation as a consequence of pruritus-related excoriations. Conservative approach and treatment of the etiology are usually sufficient in medical treatment.

PATIENT'S CONSENT:

Written informed consent was obtained from the patient for his anonymised information to be published in this article, and is available on request.

CONFLICT OF INTEREST:
Authors declared no conflict of interest.

AUTHORS' CONTRIBUTION:
AS: Contributed to the conception and design of the case report.
AS, EC: Collection of data, revision the manuscript, preparing figures and performing last evaluation. Read and approved the final manuscript.

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