

# Thrombosis of Right Spermatic Vein: A Case Report

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**Abstract-** Spermatic vein thrombosis is a rare event that mostly affects the left vein thrombosis, but, in our report, it had developed on the right one that requires a meticulous physical examination for diagnosis. The purpose of this case report is to introduce an adult patient with right spermatic vein thrombosis in a 30-year-old man admitted to the operating room for hernia surgery. Spermatic vein thrombosis is an unexpected finding in the differential diagnosis of acute testicular pain.

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## Introduction

Spermatic vein thrombosis is a rare event and requires a careful physical examination for diagnosis. Clinical symptoms include acute left testicular pain and testicular swelling in children and adults (1). In most cases of thrombosis, the left spermatic vein is affected (2). A small number of patients (18 cases) have developed spermatic vein thrombosis (1). Predisposing factors for thrombosis include Virchow's triad, factor V Leiden (3), catheterization (4), and other factors that raise blood pressure (5). In case of testicular pain, a Doppler imaging of the scrotum and other tests such as venography should be performed for diagnosis (2). The gold standard in adults or in suspected cases is a CT scan of the abdomen with contrast (6). Surgery is necessary when ultrasound results display poor vascularization of the scrotum and sperm cord (7), and thrombectomy (8) or orchiectomy has been performed in case of bleeding (9). The most severe complication in adult patients is pulmonary thromboembolism (PTE) (1). Therefore, open surgery or laparoscopy to stitch the spermatic vein may be essential in some cases (10). According to the algorithms, if the thrombosis is inside the inguinal hernia ring, the spermatic vein must be amputated (11). In this study, we report a case of thrombosis in the right spermatic vein.

## Case Report

The patient was a 30-year-old man who was referred to the clinic complaining of right lower quadrant (RLQ) pain. After physical examinations and review of past medical history, the patient was diagnosed with appendicitis. Ultrasound was conducted for further examinations, with the results indicating Amyand's hernia (Figure 1). Thus, the patient was transferred to the operating room for hernia surgery. Detailed medical history was reviewed. An IV line was fixed, and Ringer was infused. Cardiopulmonary monitoring was performed after placing the patient on the table. The preoperative vital signs were: NIBP=110/66 PR=80 SPO2=99%.

Having administered spinal anesthesia for the patient, the prepping and draping were carried out for the patient. The surgery began with an incision in the inguinal area, and the skin, subcutaneous tissue, and muscle fascia were opened. The cord, edematous and swollen, was removed. Since the cord veins were severely thrombotic (Figure 2), they were completely resected and sent to the pathology for further examination. Then, the hernia sac in the canal floor was repaired using the Bassini method by nylon 1, and after ensuring homeostasis, fascia was repaired and reconstructed cutaneously and subcutaneously, followed

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by a sterile dressing. The patient was then transferred to the recovery room in good general health condition. In pathology result, the venous cord thrombosis 6 cm in length with a diameter of 0.5 to 1 cm was observed, which contained ample blood clots.



Figure 1. Ultrasound of right thrombosis spermatic vein



Figure 2. Right thrombosis spermatic vein in surgical site

## Discussion

Spermatic vein thrombosis is an unexpected finding in the differential diagnosis of acute testicular pain (12). Most of these cases are surgically managed and resemble inguinal hernias (13). In addition, epididymitis, testicular torsion, and benign and malignant tumors of the spermatic cord are among the differential diagnoses (14). Testicular pain and swelling are the most common symptoms (1). Spermatic vein thrombosis almost always appears on the left (1). On physical examination, our patient had mild and palpable pain in the spermatic vein, which suggests varicocele. If the venous thrombosis diagnosis is ruled out, right varicocele will be clinically important for careful analysis of renal hilum or the retroperitoneal region to dismiss renal tumors with renal vein, thrombosis of the inferior vena cava, or retroperitoneal tumors. The possible predisposing factors for spermatic vein thrombosis are trauma to the vascular endothelium, slow blood flow in veins, and excessive coagulation (15). According to Kayes *et al.*, venous thrombosis can be associated with intense, prolonged sexual intercourse or exercises, genitourinary tumors, infection, trauma, hernia surgery, long-term flights, and

the use of certain medications (10). An acceptable therapeutic strategy for spermatic vein thrombosis is a conservative approach. The patient can also be managed surgically. Hashimoto and Vibeto reported that there is no need to remove the thrombus grid, as it could be well managed by non-surgical methods (2). It is reasonable to start conservative treatment than surgery. Taking anticoagulants with bed rest and testicular support can also be useful.

A spermatic vein thrombosis is a rare event. Although spermatic vein thrombosis often occurs on the left vein, in our report, it appeared on the right vein. In the absence of comorbidity, rapid surgical intervention for thrombotic resection is indicated.

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