The Journal of Emergency Medicine, Vol. 57, No. 1, pp. e29–e31, 2019

0736-4679/$ - see front matter

https://doi.org/10.1016/j.jemermed.2019.03.038

Visual Diagnosis in Emergency Medicine

FEMALE WITH PERSISTENT LOWER ABDOMINAL PAIN

Michael Ullo, MD and Gregory Sugalski, MD

Department of Emergency Medicine, Rutgers New Jersey Medical School, Newark, New Jersey
Corresponding Address: Michael Ullo, MD, PGY3 Emergency Medicine, Department of Emergency Medicine, Rutgers New Jersey Medical School, 185 S Orange Ave, Newark, NJ 07103

INTRODUCTION

Acute female pelvic pain represents a frequently encountered complaint in the emergency department. While the differential is broad, most emergent pelvic complaints involve the concern for hemorrhagic and infectious etiologies. Ovarian vein thrombosis, an uncommon clinical entity, is typically confined to females with pelvic inflammatory disease or during the postpartum period (1). Outside of isolated case reports, little is known about idiopathic ovarian vein thrombosis in an otherwise healthy female with no known risk factors.

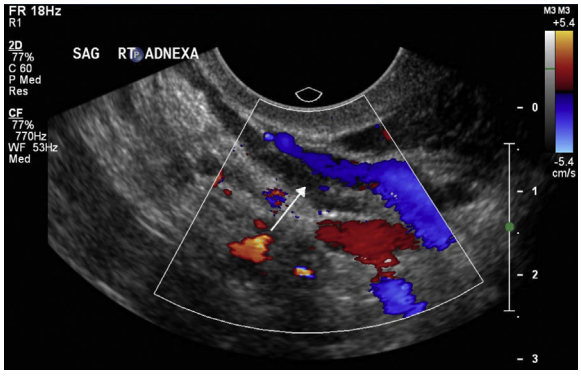

Figure 1. Sagittal view of right adnexa. Note the 5-mm tubular structure with lumen containing hypoechoic material with absent blood flow (white arrow) and the surrounding patent venous plexus vessels with demonstrated color flow (red and blue).

CASE REPORT

A 30-year-old woman with no medical or surgical history presented for the evaluation of right flank pain. Two weeks earlier, she was prescribed oral antibiotics for presumed uncomplicated cystitis. She continued to have persistent lower abdominal pain despite medication compliance, and the pain had migrated to her right

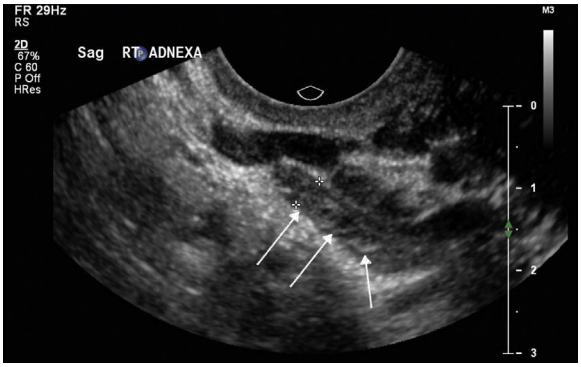

Figure 2. Sagittal view of right adnexa. Right ovarian vein (white arrows) with hypoechoic material in lumen, which is suggestive of thrombosis.

Reprints are not available.

RECEIVED: 11 January 2019; FINAL SUBMISSION RECEIVED: 18 March 2019;
ACCEPTED: 27 March 2019

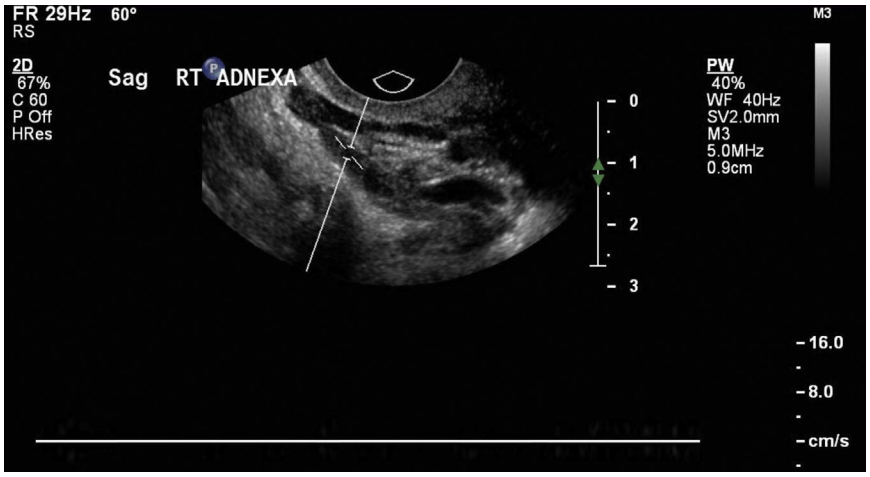

Figure 3. Pulse-waved Doppler study. Right ovarian vein with absent pulse-waved Doppler flow, which is suggestive of thrombosis.

flank and pelvis. The physical examination revealed a hemodynamically stable woman with moderate tenderness to palpation of the right lower quadrant without rebound or guarding. A pelvic examination revealed no discharge, cervical motion tenderness, or adnexal tenderness. Urine pregnancy testing was negative, and urinalysis showed sterile pyuria. A computed tomography scan of the abdomen/pelvis with intravenous contrast was unremarkable for acute pathology and a pelvic ultrasound was obtained.

Pelvic ultrasound revealed an abnormal 5-mm tubular structure superior to the right ovary in a venous plexus located in the right adnexa. Color flow studies demonstrated absent blood flow to the centrally located ovarian vein in an otherwise well perfused plexus (Figure 1, white arrow). The lumen of the vessel contained hypoechoic material with no activity detected on pulsed-wave doppler mode (Figures 2 and 3). The vessel was unable to be fully compressed on ultrasonographic evaluation, further supporting the diagnosis of right ovarian vein thrombosis (Figure 4). The gynecology service evaluated the patient and treatment with analgesia and anticoagulation was initiated. Hematology was consulted, and a hypercoagulable workup was unremarkable. The patient was discharged on hospital day three on oral anticoagulants and she was advised to continue close outpatient monitoring for continued care.

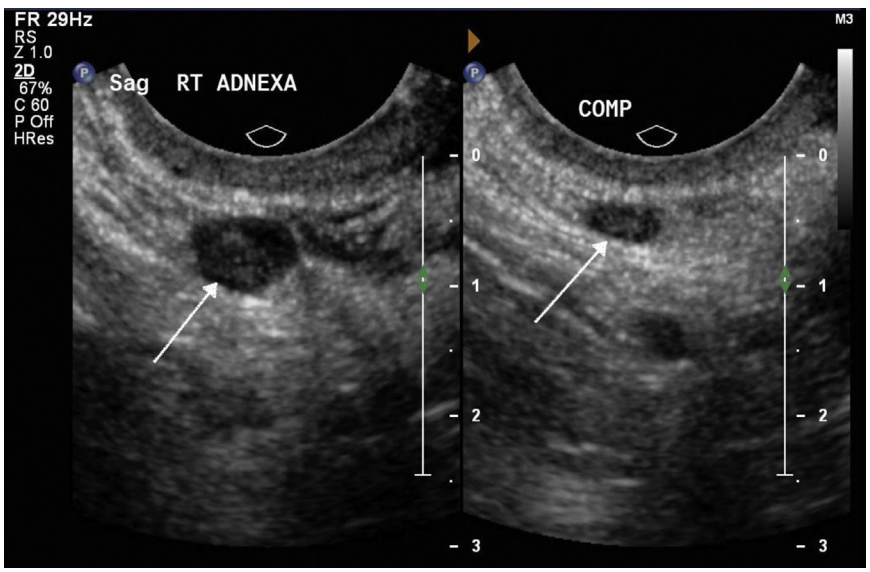

Figure 4. Compression study: Right ovarian vein (white arrow) is unable to be completely compressed with manual pressure, suggestive of thrombosis.

DISCUSSION

The diagnosis was idiopathic ovarian vein thrombosis. Ovarian vein thrombosis is an exceedingly rare condition that is frequently misdiagnosed, particularly in nonpregnant females. While rarely idiopathic, careful consideration should be given for a hypercoagulable etiology, such as a clotting disorder or an undiagnosed malignancy. Upward of 80–90% of cases occur on the right side, possibly because of retrograde blood flow on the left side that prohibits venous stasis. Although no definitive guideline for treatment exists, anticoagulation for 6 months is generally recommended. Alternative management options include catheter-directed thrombolysis, placement of an inferior vena cava filter, or laparotomy. Complications from thrombosis include clot extension into the inferior vena cava, pulmonary embolism, or death (2–5).

Acknowledgments—We thank Dr. Basil Hubbi of the Department of Radiology at Rutgers New Jersey Medical School for his assistance and support in reviewing these images.

REFERENCES

1. Wysokinska E, Hodge D, Mcbane R. Ovarian vein thrombosis: incidence of recurrent venous thromboembolism and survival. Thromb Haemost 2006;96:126–31.
2. Johnson SC, Esclapes M. Sonography of postpartum ovarian vein thrombophlebitis. J Clin Ultrasound 1998;26:143–9.
3. Plastini T, Henry D, Dunleavy K. Ovarian vein thrombus: to treat or not to treat? Blood. Adv 2017;1:1120–3.
4. Rottenstreich A, Da'as N, Kleinstern G, Spectre G, Amsalem H, Kalish Y. Pregnancy and non-pregnancy related ovarian vein thrombosis: clinical course and outcome. Thromb Res 2016; 146:84–8.
5. Prieto-Nieto M, Perez-Robledo J, Rodriguez-Montes J, Garcia-Sancho-Martin L. Acute appendicitis-like symptoms as initial presentation of ovarian vein thrombosis. Ann Vasc Surg 2004;18:481–3.