

EVIDENCE BASED STATEMENT

DOMAIN **05**, Statement **06**

TOPIC: “**Pelvic venous disorders diagnostic protocol.**”

SEARCH TERMS & SOURCES

(diagnosis) AND ((pelvic venous disorder) OR (pelvic congestion syndrome))

INCLUSION CRITERIA

- English language
- Reviews, Meta-analysis
- Publication < 10 years, only ENG

SEARCH RESULT BEFORE - AFTER SELECTION

114/19

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Meissner MH, Khilnani NM, Labropoulos N, et al. The Symptoms-Varices-Pathophysiology (SVP) classification of pelvic venous disorders a report of the American Vein & Lymphatic Society International Working Group on pelvic venous disorders. *J Vasc Surg Venous Lymphat. Disord.* 2021. May;9(3):568-584
2. Baz AA. Role of trans-abdominal and trans-perineal venous duplex ultrasound in cases of pelvic congestion syndrome. *Egypt J Radiol Nucl Med.* 2019;50:1–11
3. Dos Santos SJ, Holdstock JM, Harrison CC, et al.. Ovarian vein diameter cannot be used as an indicator of ovarian venous Reflux. *Eur J Vasc Endovasc Surg.* 2015;49(1):90–94
4. Rozenblit AM, Ricci ZJ, Tuvia J, Amis ES Jr. Incompetent and dilated ovarian veins: a common CT finding in asymptomatic parous women. *AJR Am J Roentgenol.* 2001 Jan;176(1):119-22

EVIDENCE BASED STATEMENT

Domain 5; Statement 6

IDENTIFIED REFERENCES

1. Roditi G, Wieben O, Prince MR, et al. MR Angiography Series: Abdominal and Pelvic MR Angiography. *Radiographics*. 2022 May-Jun;42(3):E94-E95.
2. Barge TF, Uberoi R. Symptomatic pelvic venous insufficiency: a review of the current controversies in pathophysiology, diagnosis, and management. *Clin Radiol*. 2022 Jun;77(6):409-417.
3. Bałabuszek K, Toborek M, Pietura R. Comprehensive overview of the venous disorder known as pelvic congestion syndrome. *Ann Med*. 2022 Dec;54(1):22-36.
4. Kolber MK, Cui Z, Chen CK, et al. Nutcracker syndrome: diagnosis and therapy. *Cardiovasc Diagn Ther*. 2021 Oct;11(5):1140-1149.
5. Arnaoutoglou C, Variawa RS, Zarogoulidis P, et al. Advances of Laparoscopy for the Diagnosis of Pelvic Congestion Syndrome. *Medicina (Kaunas)*. 2021 Sep 30;57(10):1041.
6. Brahmabhatt A, Macher J, Shetty AN, et al. Sonographic Evaluation of Pelvic Venous Disorders. *Ultrasound Q*. 2021 Sep 1;37(3):219-228.
7. Kutsenko O, McColgan Y, Salazar G. Iliac Vein Stenosis: Is the Data Strong Enough for Stenting in the Young Pelvic Venous Disorders (PeVD) Population? *Tech Vasc Interv Radiol*. 2021 Mar;24(1):100733.
8. Khilnani NM, Winokur RS, Scherer KL, Meissner MH. Clinical Presentation and Evaluation of Pelvic Venous Disorders in Women. *Tech Vasc Interv Radiol*. 2021 Mar;24(1):100730.
9. Chait J, Sen I, Kalra M. Nutcracker Syndrome: How to Diagnose It and When/How Should It Be Treated in the Pelvic Venous Disease Population. *Tech Vasc Interv Radiol*. 2021 Mar;24(1):100734.
10. Topper SR, Winokur RS. Imaging of Pelvic Venous Disorders (PeVD); Should Every Patient Get an MRI? *Tech Vasc Interv Radiol*. 2021 Mar;24(1):100731.
11. Basile A, Failla G, Gozzo C. Pelvic Congestion Syndrome. *Semin Ultrasound CT MR*. 2021 Feb;42(1):3-12.
12. Mathur M, Scoutt LM. Nongynecologic Causes of Pelvic Pain: Ultrasound First. *Obstet Gynecol Clin North Am*. 2019 Dec;46(4):733-753.
13. Patel MD, Young SW, Dahiya N. Ultrasound of Pelvic Pain in the Nonpregnant Woman. *Radiol Clin North Am*. 2019 May;57(3):601-616
14. Steenbeek MP, van der Vleuten CJM, Schultze Kool LJ, Nieboer TE. Noninvasive diagnostic tools for pelvic congestion syndrome: a systematic review. *Acta Obstet Gynecol Scand*. 2018 Jul;97(7):776-786.
15. Labropoulos N, Jasinski PT, Adrahtas D, et al. A standardized ultrasound approach to pelvic congestion syndrome. *Phlebology*. 2017 Oct;32(9):608-619.
16. Knuttinen MG, Xie K, Jani A, et al. Pelvic venous insufficiency: imaging diagnosis, treatment approaches, and therapeutic issues. *AJR Am J Roentgenol*. 2015 Feb;204(2):448-58.
17. O'Brien MT, Gillespie DL. Diagnosis and treatment of the pelvic congestion syndrome. *J Vasc Surg Venous Lymphat Disord*. 2015 Jan;3(1):96-106.
18. Phillips D, Deipolyi AR, Hesketh RL, et al. Pelvic congestion syndrome: etiology of pain, diagnosis, and clinical management. *J Vasc Interv Radiol*. 2014 May;25(5):725-33.
19. Verde F, Johnson PT. One not to miss: ovarian vein thrombosis causing pulmonary embolism with literature review. *J Radiol Case Rep*. 2012 Sep;6(9):23-8.

EVIDENCE BASED STATEMENT

Domain 5; Statement 6

TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 05, Statement 06, TOPIC: “**Pelvic venous disorders diagnostic protocol.**”

A univocal diagnosis of pelvic venous disorder is challenging due to the blurred clinical scenario and its still to be properly investigated correlation with the instrumental diagnostics findings. While the detection of the pelvic reflux and/or vein dilation is easily obtainable, it's direct correlation with the signs and symptoms can be uncertain indeed. The differential diagnosis must include gastroenterology, obgyn, musculoskeletal, neurological, psychological and urological conditions. An attempt to systematize the clinical scenario and the related diagnostic work up has been recently made by the Symptoms-Varices-Pathophysiology (SVP) classification.

[Meissner MH, Khilnani NM, Labropoulos N, et al.. The Symptoms-Varices-Pathophysiology (SVP) classification of pelvic venous disorders a report of the American Vein & Lymphatic Society International Working Group on pelvic venous disorders. *J Vasc Surg Venous Lymphat. Disord.* 2021. May;9(3):568-584]

After a careful history and clinical evaluation, ultrasound remains the first fundamental diagnostic approach to the patient.

This must include a transabdominal assessment in various body positions, including reverse-Trendelenburg to facilitate reflux evocation.

Transvaginal and transperineal scanning should be included in the case evaluation, favoring also the eventual detection of other possible gynaecological causes and of lower limb venous drainage involvement, respectively.

[Baz AA. Role of trans-abdominal and trans-perineal venous duplex ultrasound in cases of pelvic congestion syndrome. *Egypt J Radiol Nucl Med.* 2019;50:1–11]

Vein dilation detection has been considered a positive predict factor in the past, yet, almost 50% of asymptomatic patients can present significantly enlarged vessels.

[Rozenblit AM, Ricci ZJ, Tuvia J, Amis ES Jr. Incompetent and dilated ovarian veins: a common CT finding in asymptomatic parous women. *AJR Am J Roentgenol.* 2001 Jan;176(1):119-2]

Computed tomography and Magnetic Resonance assessment are of paramount importance to better define the pelvic drainage compromise, yet they remain based on mainly caliber parameters whose cut off values still lack proper validation.

***[Dos Santos SJ, Holdstock JM, Harrison CC, et al.. Ovarian vein diameter cannot be used as an indicator of ovarian venous Reflux. *Eur J Vasc Endovasc Surg.* 2015;49(1):90–94]**

While diagnostic laparoscopic is still largely used, it should be remembered that up to 90% of pelvic venous disorders can be missed by this approach.

[Wozniak S. Chronic pelvic pain. *Ann Agric Environ Med.* 2016;23(2):223–226]

Venography remains the gold standard for final pelvic venous disorder diagnosis. Since it is an invasive procedure, it should be reserved after properly planned diagnostic work up as per the above description and in case of interventional therapy intent.

[Herrera-Betancourt AL, Villegas-Echeverri JD, López-Jaramillo JD, et al. Sensitivity and specificity of clinical findings for the diagnosis of pelvic congestion syndrome in women with chronic pelvic pain. *Phlebology.* 2018;33(5):303–308]

EVIDENCE BASED STATEMENT

Domain 5; Statement 6

STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 05, Statement 06

“Pelvic venous disorder diagnosis requires a detailed history and clinical evaluation, followed by expert ultrasound scanning of the abdominal and pelvic region, together with the lower limbs. Magnetic Resonance and/or Computed Tomography might be helpful. Venography is an invasive test and must be performed only after proper risk/benefit evaluation”

SELECTED REFERENCES

1. Meissner MH, Khilnani NM, Labropoulos N, et al.. The Symptoms-Varices-Pathophysiology (SVP) classification of pelvic venous disorders a report of the American Vein & Lymphatic Society International Working Group on pelvic venous disorders. *J Vasc Surg Venous Lymphat. Disord.* 2021. May;9(3):568-584
2. Baz AA. Role of trans-abdominal and trans-perineal venous duplex ultrasound in cases of pelvic congestion syndrome. *Egypt J Radiol Nucl Med.* 2019;50:1–11
3. Rozenblit AM, Ricci ZJ, Tuvia J, Amis ES Jr. Incompetent and dilated ovarian veins: a common CT finding in asymptomatic parous women. *AJR Am J Roentgenol.* 2001 Jan;176(1):119-2
4. Dos Santos SJ, Holdstock JM, Harrison CC, et al.. Ovarian vein diameter cannot be used as an indicator of ovarian venous Reflux. *Eur J Vasc Endovasc Surg.* 2015;49(1):90–94
5. Wozniak S. Chronic pelvic pain. *Ann Agric Environ Med.* 2016;23(2):223–226
6. Herrera-Betancourt AL, Villegas-Echeverri JD, López-Jaramillo JD, et al. Sensitivity and specificity of clinical findings for the diagnosis of pelvic congestion syndrome in women with chronic pelvic pain. *Phlebology.* 2018;33(5):303–308

identified LITERATURE BIAS

Lack of head to head comparison among different diagnostic protocols

SUGGESTED NEXT LINES OF RESEARCH

Head to head comparison among different diagnostic protocols
Protocols for pelvic venous thrombosis identification