

Approach to VARICOCELE in Adults

Background

- Vascular lesion characterized by the dilation of gonadal veins in the scrotum, sometimes described as having a "bag of worms" appearance.
- Prevalence in adult men is about 15% overall, but may reach up to 40% in men attending infertility clinics.
- Affects adolescents and young adult men

Clinical Presentation

- Most varicoceles are asymptomatic
- Painless scrotal swelling
- Dull, aching, usually left-sided scrotal pain
- Infertility

- Symptoms suggest secondary varicocele*

Evaluation

Diagnosis

Physical Exam

- Should be attended in supine and standing positions, both with and without Valsalva maneuver (which helps in dilating varicocele and makes it more obvious)
- Includes assessment of testicular size and consistency

Testing

- The grading system used by Dubin and Amelar, based on the clinical features
- Subclinical: Not palpable or visible at rest or during Valsalva but detectable on US
- Grade I (Small size): Palpable during Valsalva maneuver
- Grade II (Medium size): Palpable at rest, but not visible.
- Grade III (Large size): Visible and palpable at rest.

- Routine semen analysis, typically performed twice
- Ultrasound is the imaging modality of choice (consider diagnostic if venous diameter ≥ 3 mm)
- If patient's presentation suggest secondary varicocele, consider different imaging modality (US, CT or MRI) of abdomen

Ultrasound

(venous diameter ≥ 3 mm)

Management

- Normal semen parameters
- Normal testicular size

Treat symptoms

- NSAIDs
- Scrotal support

If not relieved
in 4 weeks

Surgical Options are
considered as per Urology
consultant assessment

- Abnormal semen parameters
- Abnormal testicular size

Treat symptoms

- NSAIDs
- Scrotal support

Varicocele treatment is not indicated in subclinical varicocele

Symptoms that may suggest secondary varicocele including:

- Late-onset varicocele
- Gross hematuria, Flank pain (may suggest renal cell carcinoma or retroperitoneal fibrosis or tumors)
- History of alcohol abuse, History of hepatitis B or C infection (may suggest portal hypertension due to cirrhosis)

Red Flags*

References

- 1) Mohammed A, Chinegwundoh F. Testicular varicocele: an overview. *Urol Int.* 2009;82(4):373-379.
doi:10.1159/000218523
- 2) Practice Committee of the American Society for Reproductive Medicine; Society for Male Reproduction and Urology. Report on varicocele and infertility: a committee opinion. *Fertil Steril.* 2014;102(6):1556-1560.
doi:10.1016/j.fertnstert.2014.10.007
- 3) Report on varicocele and infertility, (AUA) and the Practice Committee of the American Society for Reproductive Medicine (ASRM).
- 4) Freeman, S. et al. "Ultrasound evaluation of varicoceles: guidelines and recommendations of the European Society of Urogenital Radiology Scrotal and Penile Imaging Working Group (ESUR-SPIWG) for detection, classification, and grading." *European Radiology* 30 (2019): 11-25.
- 4) Dynamed