Varicocele and PCS
One and the same?

Learning from Cases

Tim Sebastian
University Hospital Zurich

Illustrations: © by nilskucher.com
Disclosure

Speaker name:
Tim Sebastian

I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☒ I do not have any potential conflict of interest
Overlapping symptoms
but often different clinical setting

Varicocele
- scrotal swelling («bag of worms»), sometimes painful
«Correctable cause for male infertility»

Pelvic congestion syndrome
- pelvic pain (exacerbated by standing, coitus, menstruation), vulvar swelling, leg varicosis

Symptom Overlap:
Pelvic pain, groin pain, leg varicosis, obstipation, hemorrhoids, leg heaviness, rectal discomfort, urinary urgency
Case 1 - 36 y female patient with suspected PCS

- Previously delivered 3 infants
- Clinically suspected PCS (symptom duration 5 years)
  - Position-dependent pelvic pain
  - Pain worsened around the menstruation period (dysmenorrhoea)
  - Pain was radiating into right groin and thigh
- Multiple medical check-ups with her gynacologists were unremarkable
Case 1 - 36 y female patient with suspected PCS

Clinical suspicion
Abnormal Ultrasound

Nutcracker anatomy?
Retrograde flow in ovarian vein?
Case 1 - 36 y female patient with suspected PCS

Parauterine veins with reflux during valsalva
Case 1 - 36 y female patient with suspected PCS

Parauterine veins and dilated left and right ovarian vein
Case 1 - 36 y female patient with suspected PCS

A: rule out May Thurner compression
B: rule out nutcracker compression

Jugular access
- 5-French Access
- Cobra catheter
- Soft Terumo wire
Case 1 - 36 y female patient with suspected PCS

A: Embolisation (ethoxysclerol)
B: Coiling
Three mechanisms for varicocele and PCS (Greiner)

- **Type 1:** Valvular or parietal insufficiency without deep venous obstruction (primary insufficiency)

- **Type 2:** Obstruction in a draining vein responsible for symptomatic collaterals (e.g. May-Thurner, Nutcracker, post-thrombotic central veins)

- **Type 3:** Others
Case 2 - 48 y male patient with suspected varicocele

- Symptomatic recurrent varicocele (left > right)
  - Scrotal pain, groin pain (position-dependent)
  - Left sided pain during exercise (venous claudication)
- Previous surgery
  - Laparoscopic left testicular vein clipping
  - Surgical varicocelectomy
- Professional driver (unable to work)
Case 2 - 48 y male patient with suspected varicocele

Recurrent varicocele with reflux during valsalva
Case 2 - 48 y male patient with suspected varicocele

Atypical compression of the left common iliac vein by the left common iliac artery (?)

Recurrent varicocele

Clinical suspicion → Abnormal ultrasound → Abnormal MRI
Case 2 - 48 y male patient with suspected varicocele

**Intervention 1:**
Stent implantation to treat atypical MTS

Outcome:
Improvement of leg pain but persisting scrotal pain
Intervention 2:
Embolization due to persistent symptoms

Case 2 - 48 y male patient with suspected varicocele

Coils + ethysclerol embolization of right varicocele via obturator vein

Coils + ethysclerol embolization of left varicocele via obturator vein and circumflexa
Three mechanisms for varicocele and PCS (Greiner)

- **Type 1:**
  Valvular or parietal insufficiency without deep venous obstruction (primary insufficiency)

- **Type 2:**
  Obstruction in a draining vein responsible for symptomatic collaterals (e.g. May-Thurner, Nutcracker, post-thrombotic central veins)

- **Type 3:**
  Others
What we learn from the cases:

- Varicocele (men) and PCS (women) are frequent conditions with anatomical similarities that may present with overlapping symptoms.
- Choice of treatment depends on the underlying cause of reflux (primary versus secondary).
- In case of underlying obstruction embolisation should be performed delayed if symptoms of congestion persist.
- There are still many open questions regarding the real pathophysiology and the durability of embolization therapy that need to be answered.
Varicocele and PCS
One and the same?

Learning from Cases

Tim Sebastian
University Hospital Zurich