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# ***Common iliac vein compression secondary to significant bladder distension***

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# Disclosure

Speaker name:

Cleoni Pedron

I have the following potential conflicts of interest to report:

- Consulting – Cook Medical®
  - Employment in industry
  - Stockholder of a healthcare company
  - Owner of a healthcare company
  - Other(s)
- 
- do not have any potential conflict of interest

# Object and purpose

Unilateral lower extremity (LE) edema is a typical clinical presentation of patients with deep venous thrombosis (DVT) or extrinsic deep venous compression (EVC).

May & Thurner syndrome, pelvic tumors and retroperitoneal fibrosis are known causes of EVC.

We describe three patients with unilateral lower extremity edema, secondary to significant bladder distension.

# History

Venous obstruction by a distended urinary bladder was first described in 1960, by Carlsson and Garsten.

# Patient 1

- Male, 61 y.o.
- Left lower-extremity swelling
- Duplex scan – Negative for thrombus but impaired proximal flow.
- Adenocarcinoma of the prostate with bone metastases

# PhleboTc

Pre

After Bladder evacuation

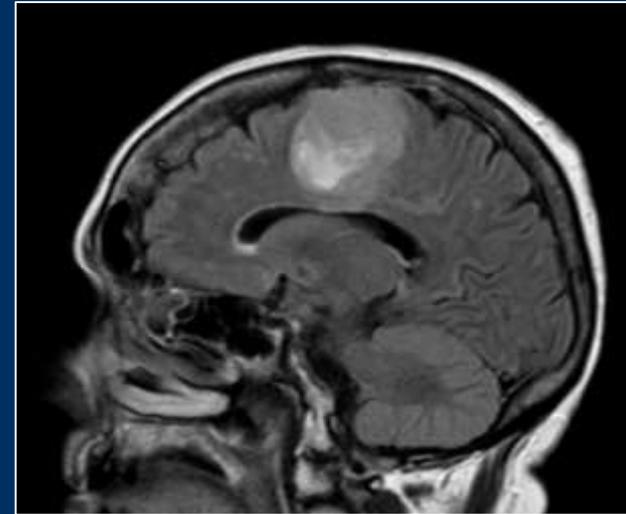


# Treatment - Patient 1

- Prostatectomy
- Radiotherapy
- Chemotherapy

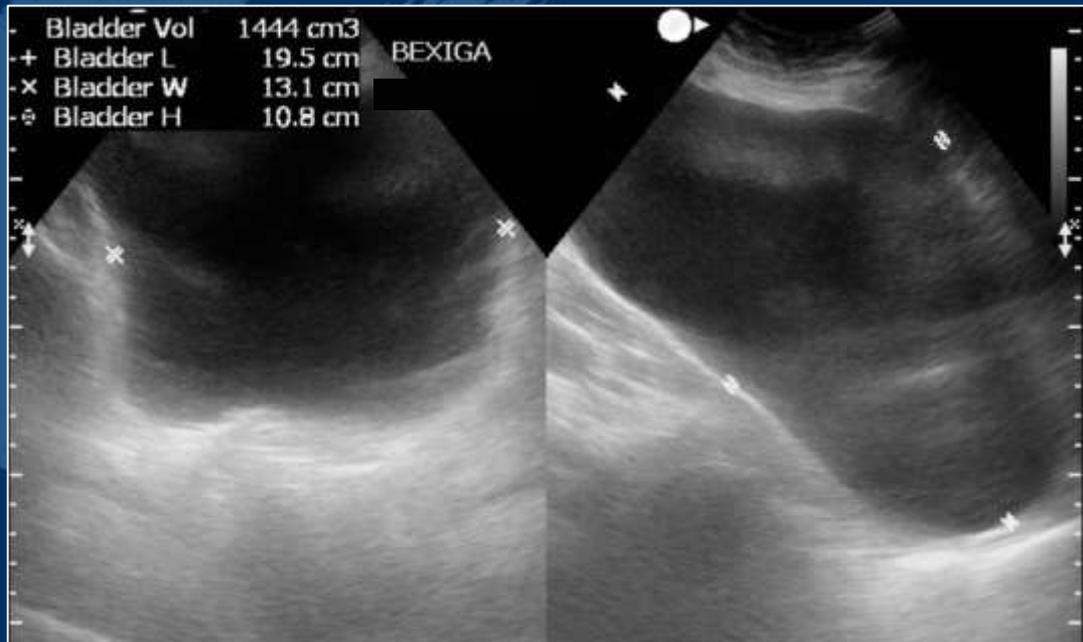
# Patient 2

- Female, 71 yo
- Bilateral lower-extremity swelling
- Surgical resection of grade IV glioma
- Hemiparesis and neurogenic bladder
- Duplex scan – No DVT but there was compression of the bilateral common iliac by the distended bladder (residual volume of 1.444 ml) .

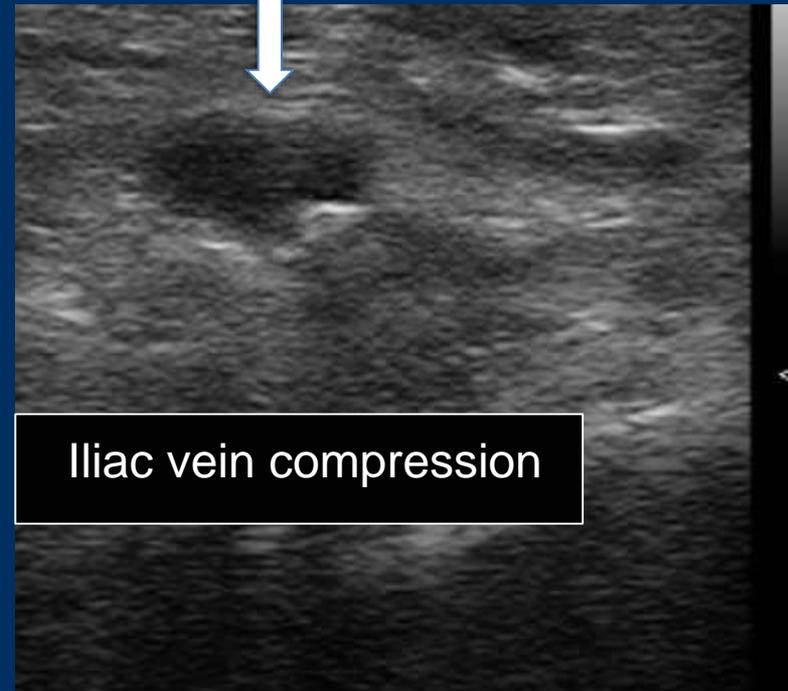


# Patient 2

## Ultrasonography



Artery



Iliac vein compression

# Treatment - patient 2

- Cystostomy
- Resolution of edema

# Patient 3

- Male, 38 yo
- Schizophrenia (biperiden – anticholinergic agent)
- Right lower extremity swelling

# Patient 3

Duplex scan — Extensive occlusive thrombosis extending from the right popliteal vein into the right common femoral vein.

# Treatment - Patient 3

- Catheter directed thrombolysis
- Popliteal access
- rt-PA for 24 hours



# Treatment - Patient 3

Pre – iliac vein phlebography

Post – iliac vein phlebography after bladder evacuation (1.250 ml)

Bladder distention



# Treatment - Patient 3

- Post catheter directed thrombolysis
- Complete thrombolysis
- Anticoagulation - Rivaroxaban<sup>®</sup>
- Discontinuation of Biperiden (difficulty in emptying the bladder)
- Urodynamic study - normal

# Discussion

- Several disorders may cause bladder distension
  - Neurogenic bladder (diabetes/autonomic dysfunction)
  - Pelvic or abdominal tumor
  - Enlarged prostate
  - Iliac aneurysm
  - Drugs (side effects)
  - Urethral stricture (calculi/stenosis)

Case Reports in Urology 2015

Internal M Journal 2012

J Vasc Surg 1999;29:724-6.

Can J Diabetes 2014;38:302-304.

# Conclusions

- Urinary bladder enlargement is a potential cause of DVT and/or lower limb edema.
- Treatment involves restoration of vein patency by urinary drainage and/or treatment of the cause of the urinary obstruction, combined with DVT treatment, if present.
- Bladder distension can be the cause of edema or DVT.

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