

Venous ruptures are rare, but.....

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Disclosure

Professor Gerry O'Sullivan FRCR FRCPI FSIR FEBIR

I have the following potential conflicts of interest to report:

Consulting

Bard

Boston Scientific

Cook Medical

Creganna

Marvao Medical

Medtronic

Mermaid

Stockholder of a healthcare company

Marvao Medical, Vetex

Case History

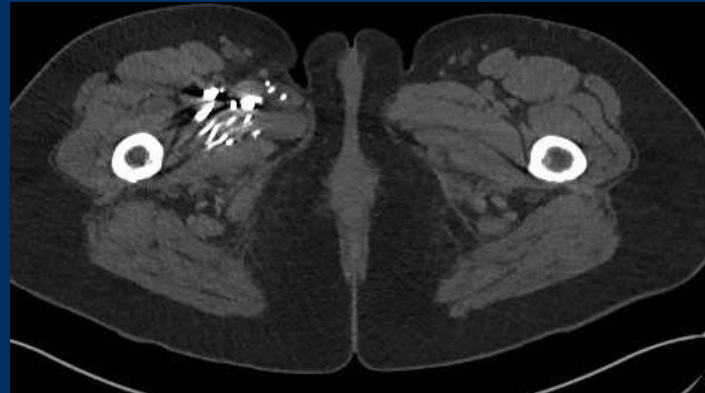
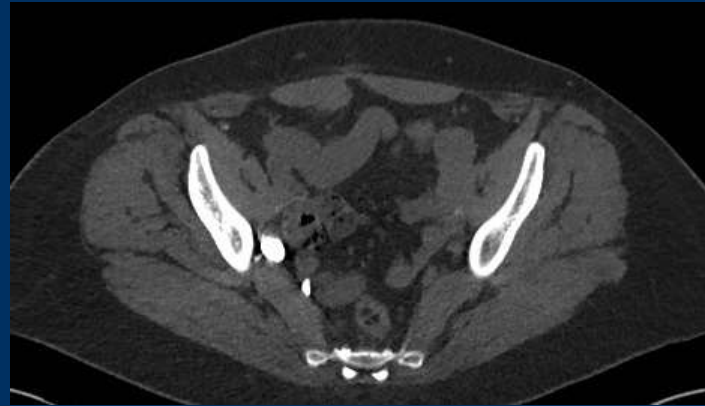
- 47 y old female
- Diagnosed with Endometrial Cancer Nov 2016
- While undergoing hysterectomy and pelvic clearance the R EIV was damaged
- Vascular surgical team called in- repaired vessel
- 5 days later R leg started to swell

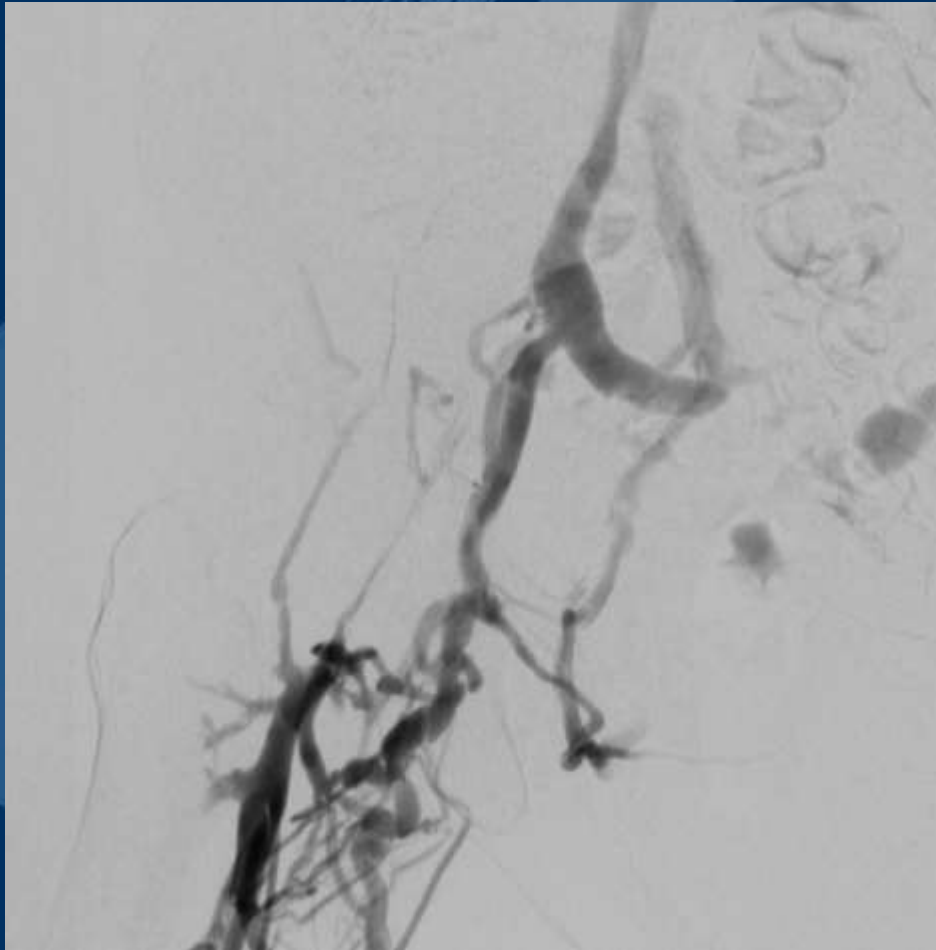


Difficult to identify thrombosis
R EIV poorly defined

Right leg is swollen

Right leg swelling persisted- Direct CTV R foot injection with compression stockings:





R upper CFV and EIV occlusion

Technically should be crossable

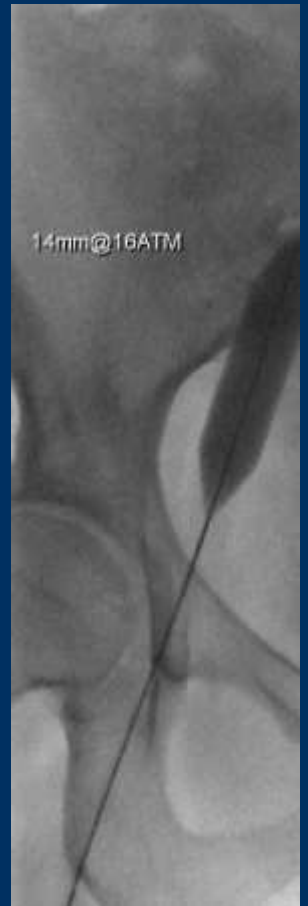
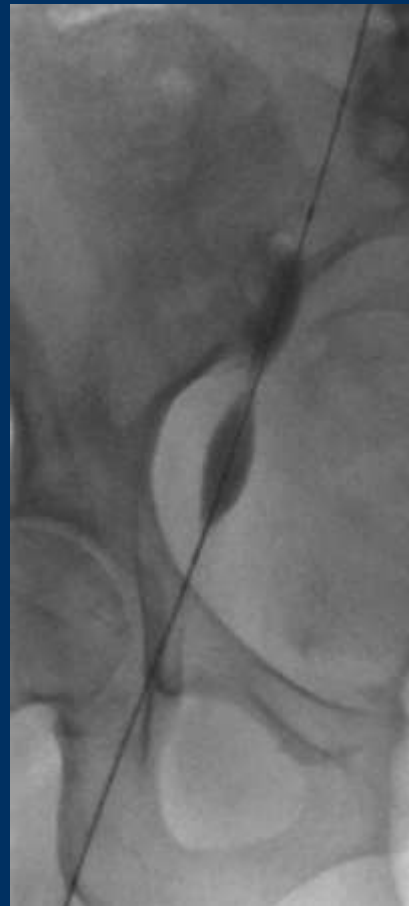
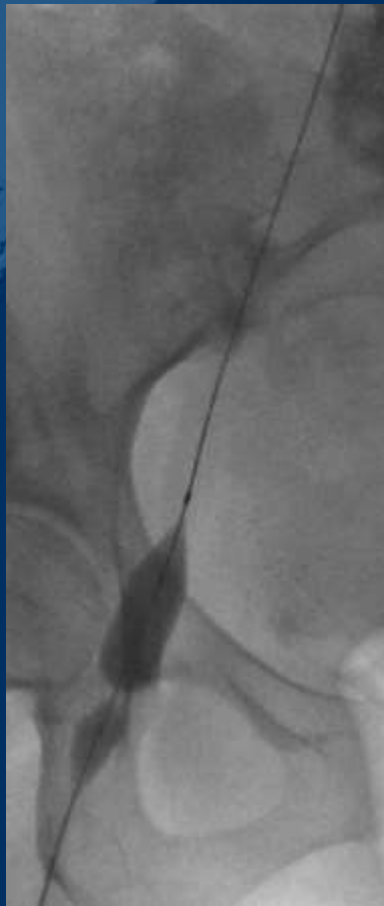
Then:

IVUS

balloon 14mm @ 20 atm

stent 14/150 venous stent

repeat balloon 14mm @ 20 atm

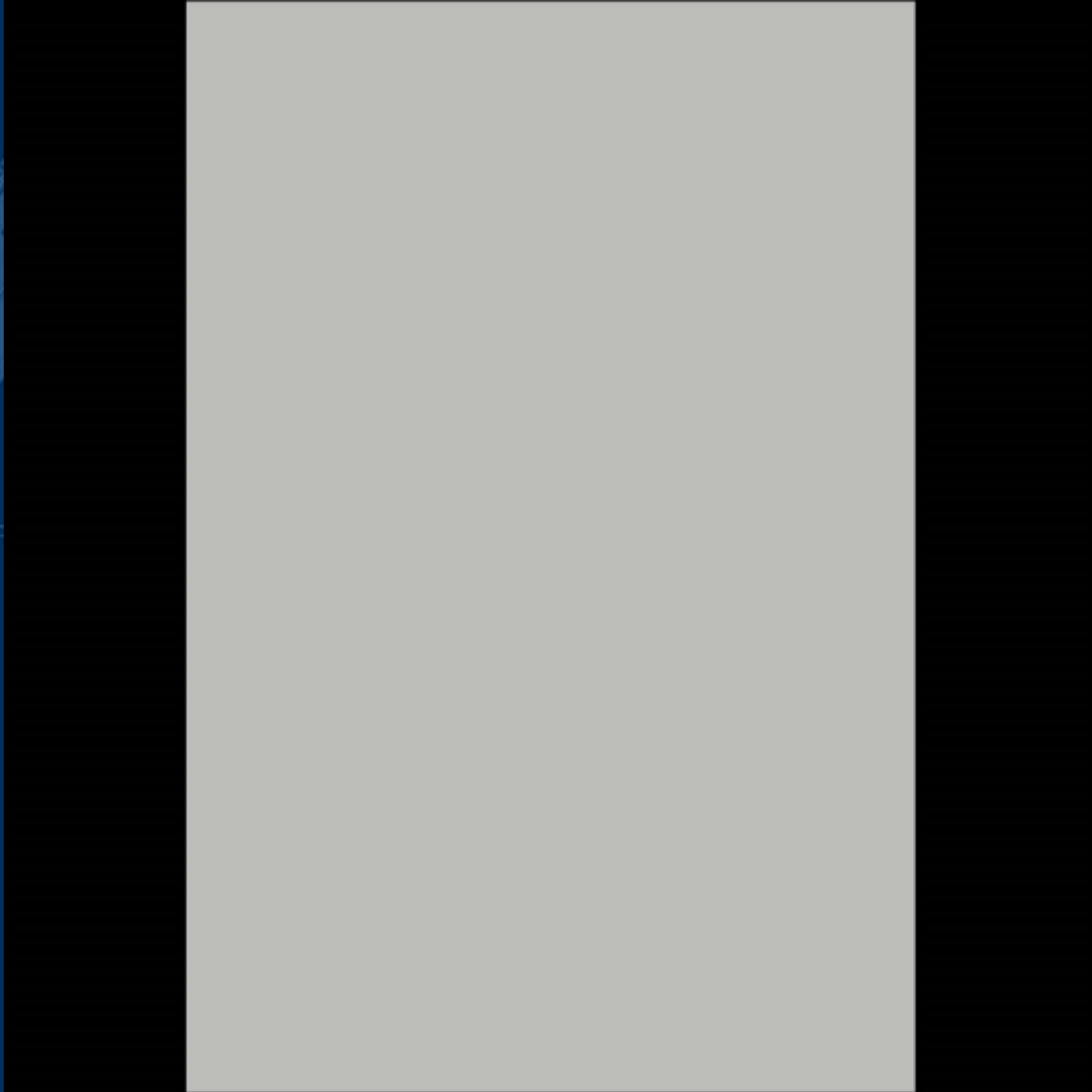


Post 14mm@20ATM

At this stage patient
had some pain

Not exceptional

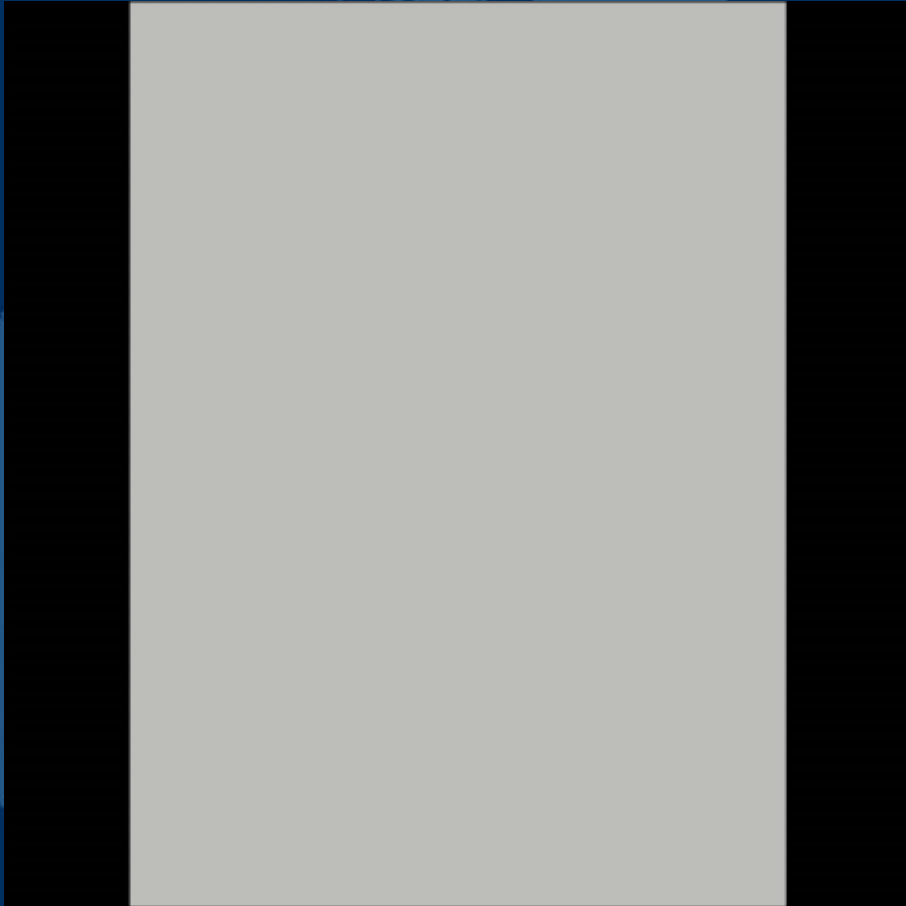
1508h



Battlestations

- Call for help
- Put in more IV lines
- Establish arterial access
- Get a stent in as quickly as possible

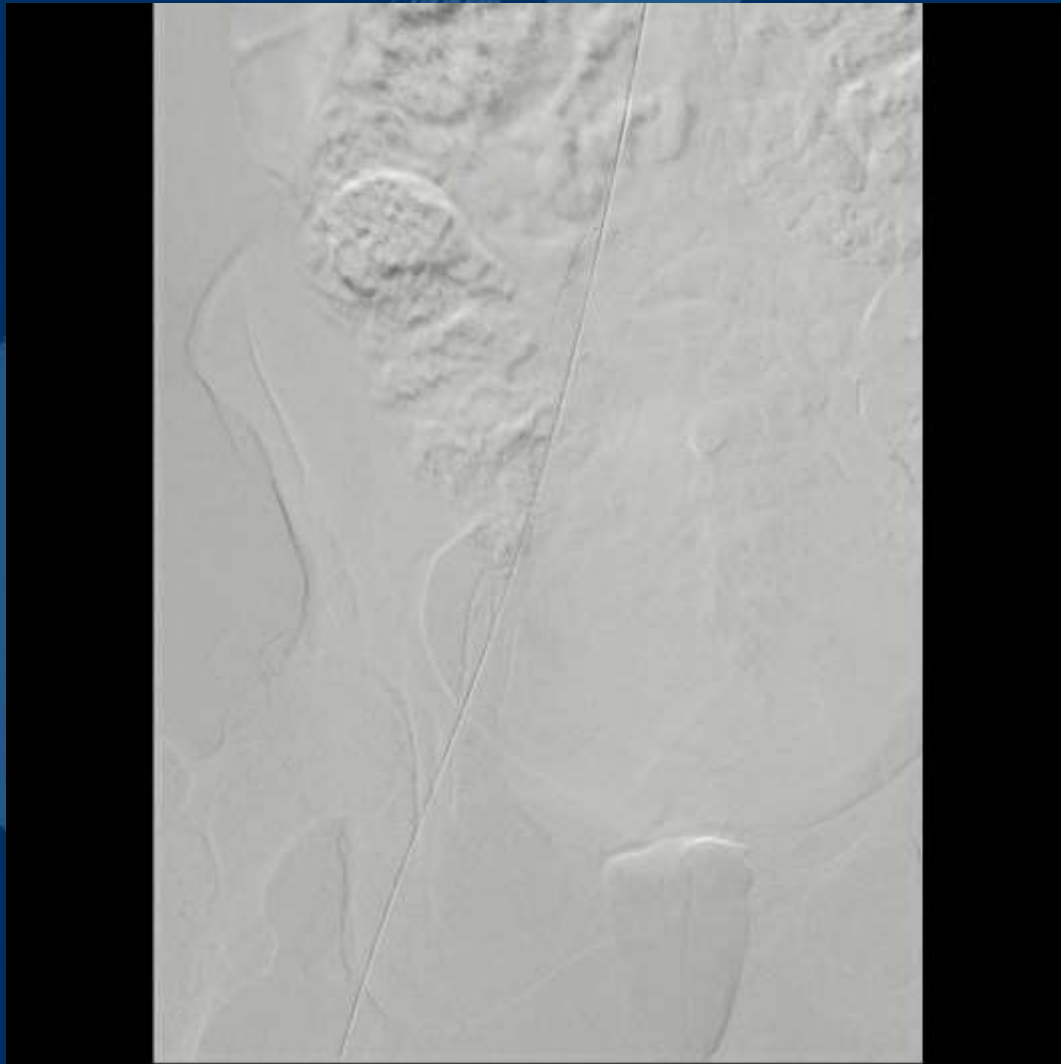
1512h



Did you say insert a BARE STENT???

Post Cook ZV 14/140

1516h

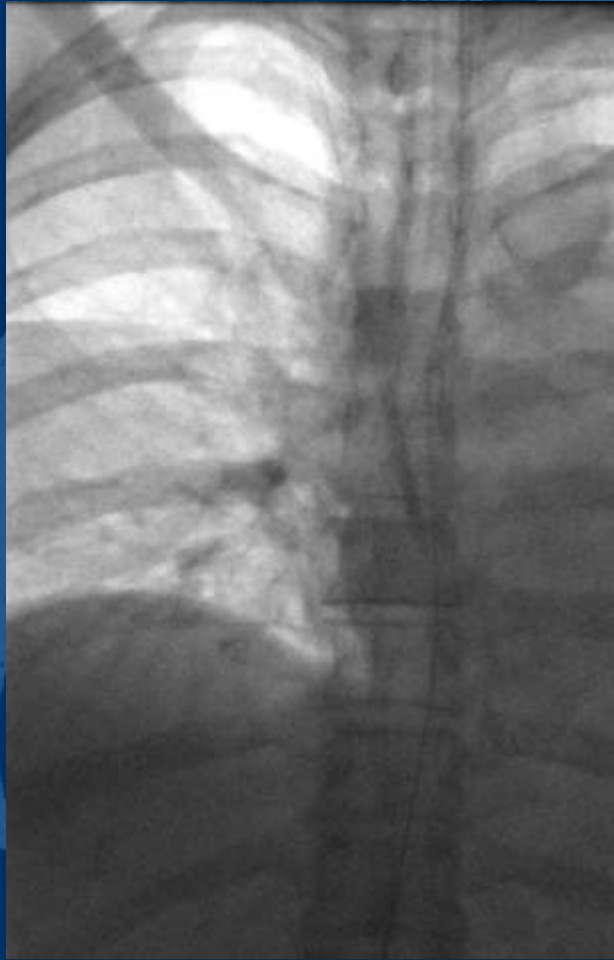


Post Gore 13/100 Viabahn

I felt we had stabilised situation.....

- However nurses said BP was hard to get??????
- Decided to place a large bore neck line and arterial access

1520h



1527h



On seeing arterial angio and
CONFIRMING systolic BP of
47mmHg I called a code

Patient arrested three times in next 2
hours

Needed 23 units of blood

Without the skill and expertise of my
vascular surgical colleagues (Professor
S. Sultan) she would undoubtedly
have died

Learning points

- Venous rupture is more likely vertically orientated than transverse- so stent grafts may need to extend several cm north and south of “tear”
- In this patient surgeon said the tear was way up near the IVC!!!!

Recognize those patients in whom it is more likely to occur; in those consider

- 3 point access (IJV/CFV R L)
- Arterial access
- Central venous access
- GA
- Urethral catheter
- Having EVAR kit in lab ready to go
- Blood grouped and crossed
- Surgical back up immediately available on site

Which patients are at higher risk?

Factors which possibly increase risk of rupture

- Post thrombotic
- Post prior surgical repair of vein
- Post radiotherapy
- Post repeated venous catheterisation

Not significant

- Age
- Sex
- Cancer
- Acute DVT
- IVC v Iliac

How rare is a SERIOUS rupture?

- An email to most European centres suggested 4 ruptures in > 1200 cases- so perhaps 1/300
- Be prepared.....
 - Proper Planning Prevents Poor Performance