

Venous Incompetence

All Ireland National Thrombosis Conference

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Definition of venous incompetence

- Chronic **venous insufficiency** occurs when these valves become damaged, allowing the blood to leak backward. ... CVI most commonly occurs as the result of a blood clot in the deep veins of the legs, a disease known as deep vein thrombosis (DVT).

Cause of Venous Incompetence

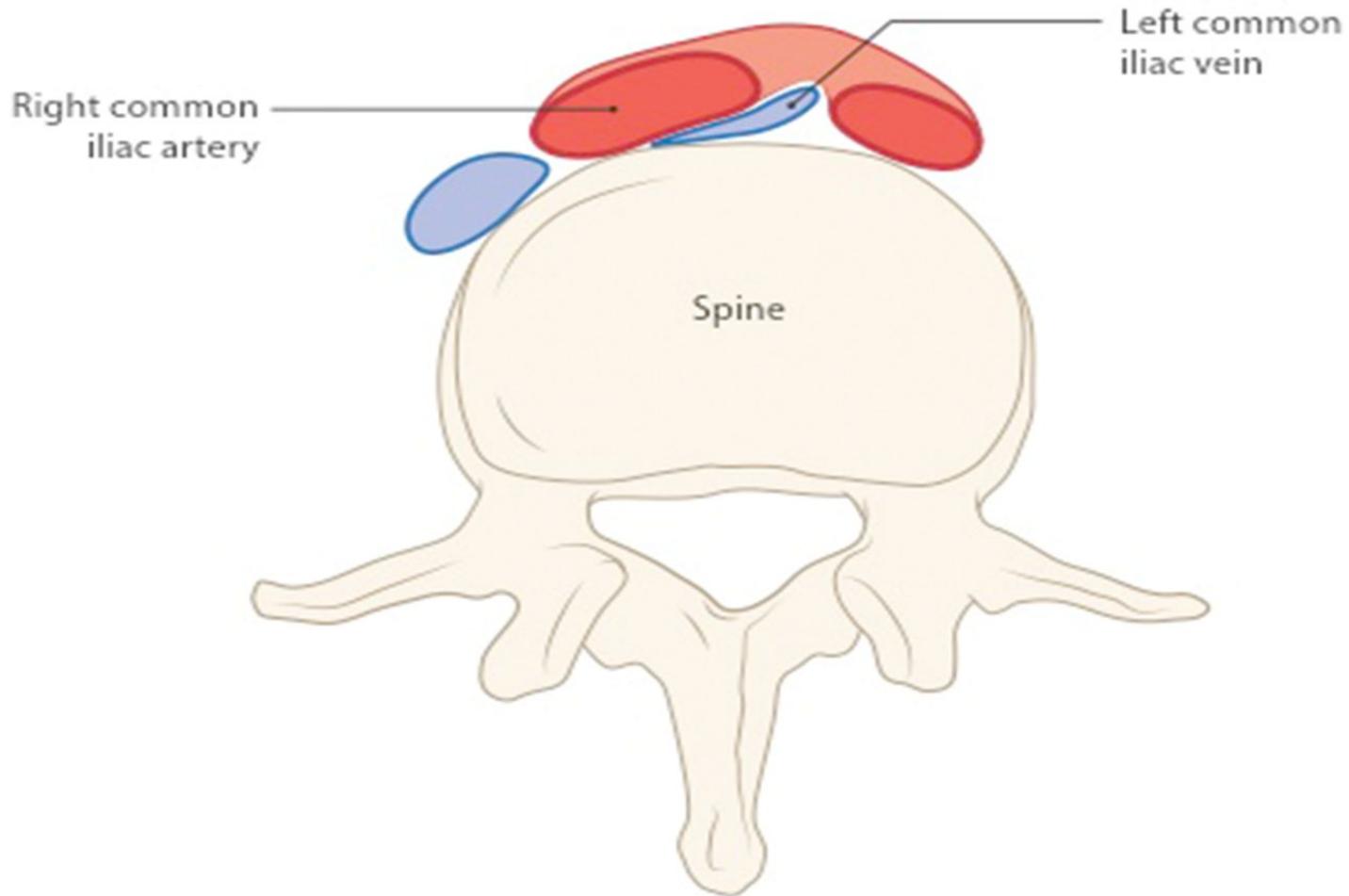
Poor venous flow usually due to:-

a) DVT

b) Mechanical obstruction –

eg May Thurners Syndrome

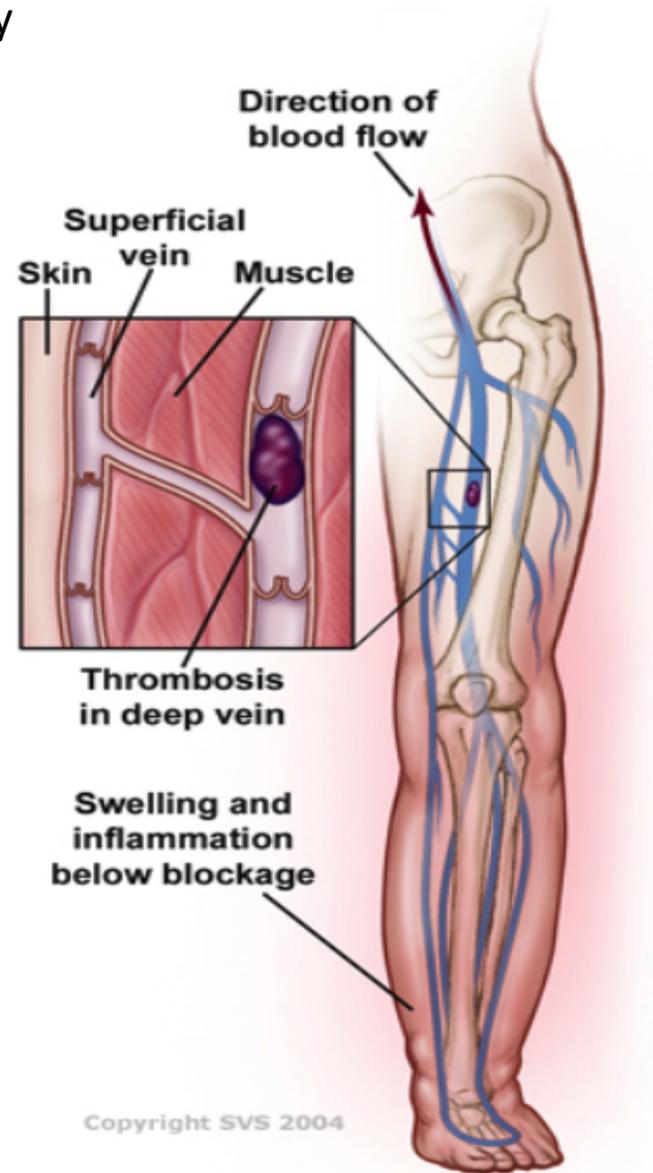
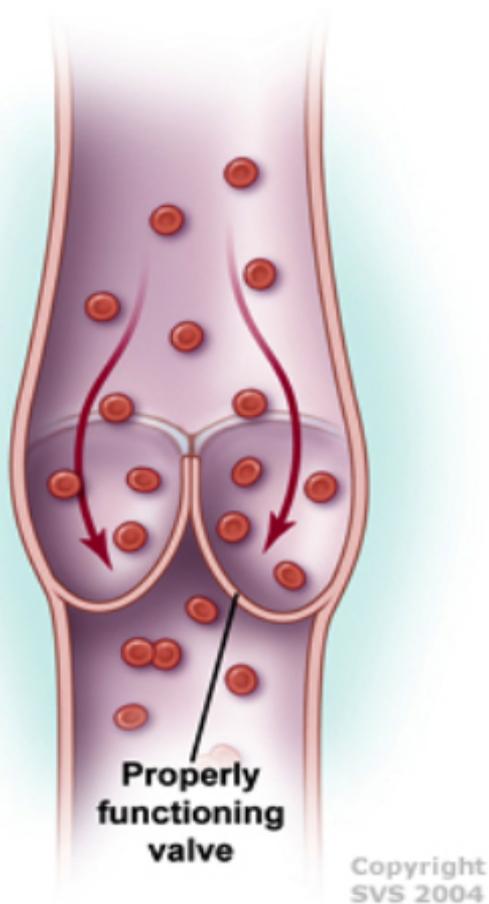
Example of May Turner compression



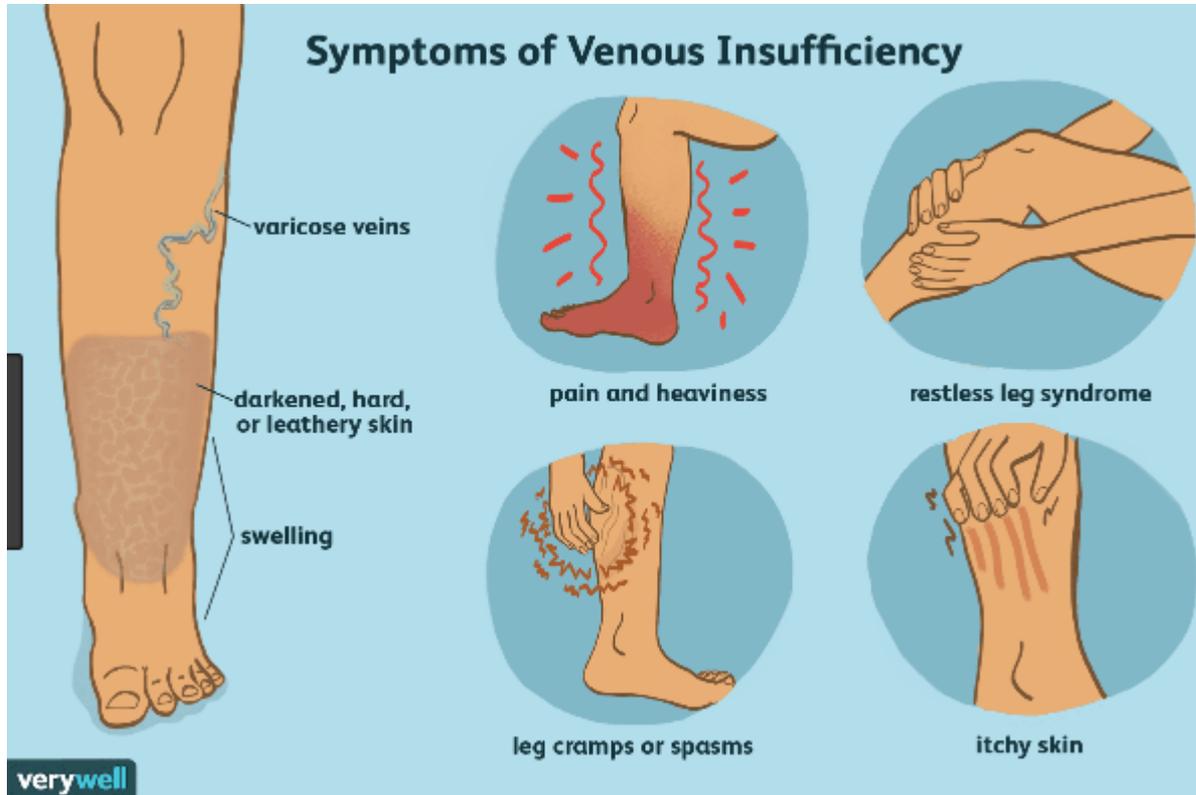
PTS

Demonstrating obstruction by thrombus

Normal functioning valve



Signs and Symptoms



Diagnosis

- a) Severity of PTS often defined by the Villata Scale
- Provides a global PTS assessment not a binary outcome
 - Does not include venous claudication
 - Patient can easily reach score of ≥ 5

Other scoring systems:

Ginsberg, Brandjes, Widmer, CEAP, Venous Clinical Scoring system

Assessment can be subjective - *see next slide re Villata*

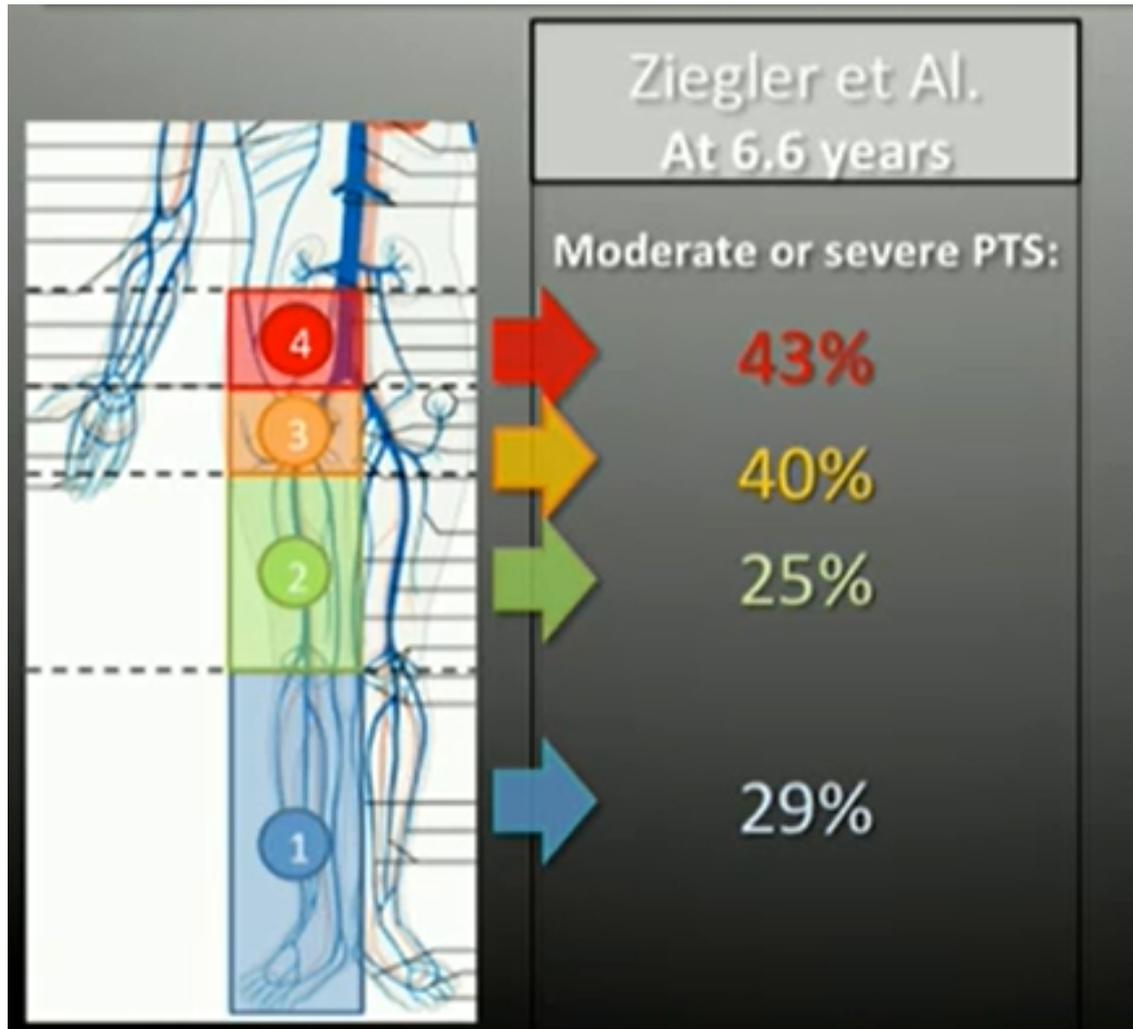
How to assess severity? – difference between Villata and Ginsberg clinical scales – Susan Kahn 2006 JTH

b) Vascular or duplex ultrasound

Table 1. VILLATA S P I S SCORE

Symptoms/clinical signs	None	Mild	Moderate	Severe
Symptoms				
Pain	0 points	1 point	2 points	3 points
Cramps	0 points	1 point	2 points	3 points
Heaviness	0 points	1 point	2 points	3 points
Paresthesia	0 points	1 point	2 points	3 points
Pruritus	0 points	1 point	2 points	3 points
Clinical signs				
Pretibial edema	0 points	1 point	2 points	3 points
Skin induration	0 points	1 point	2 points	3 points
Hyperpigmentation	0 points	1 point	2 points	3 points
Redness	0 points	1 point	2 points	3 points
Venous ectasia	0 points	1 point	2 points	3 points
Pain on calf compression	0 points	1 point	2 points	3 points
Venous ulcer	Absent			Present

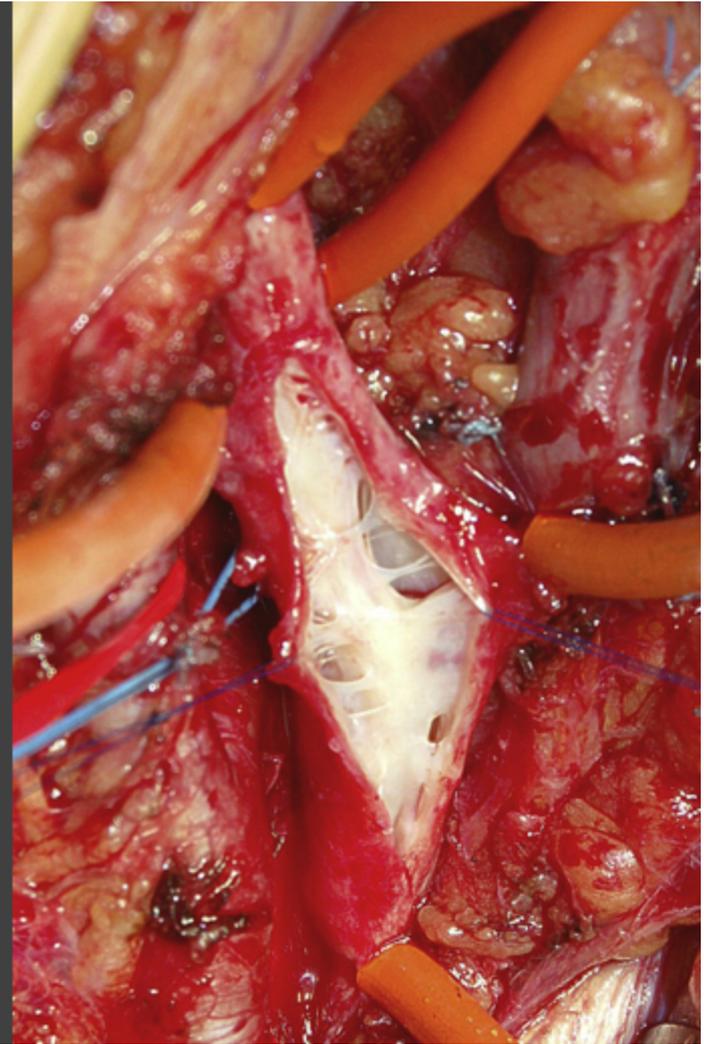
PTS and site of VTE



Sequela of DVT



Chronic deep venous disease



Prevention – good news

- Routine now in all hospitals
- Kings College London have reported a reduction in HAT and we have also seen this at North Bristol Trust

Treatment options for DVT

Conservative
treatment

Anticoagulation

Compression

Leg elevation

Limited impact on post
thrombotic syndrome

Treatment focuses on:-

Good anticoagulation, esp in first 2/52

Compression hosiery –

- Brandjes, Prandoni 1997– no placebo arm
- Kahn 2008– SOX Trial – poor compliance, and fitted late
- Mol – 2016 still advocates GECS but looking at 1yr versus 2 years – suggests 2 years and continuing in some patients

Development of PTS was considered ‘unfortunate’

Thrombolytic therapy

Deep vein thrombosis

Consider catheter-directed thrombolytic therapy for patients with symptomatic iliofemoral **DVT** who have:

- symptoms of less than 14 days' duration **and**
- good functional status **and**
- a life expectancy of 1 year or more **and**
- a low risk of bleeding.

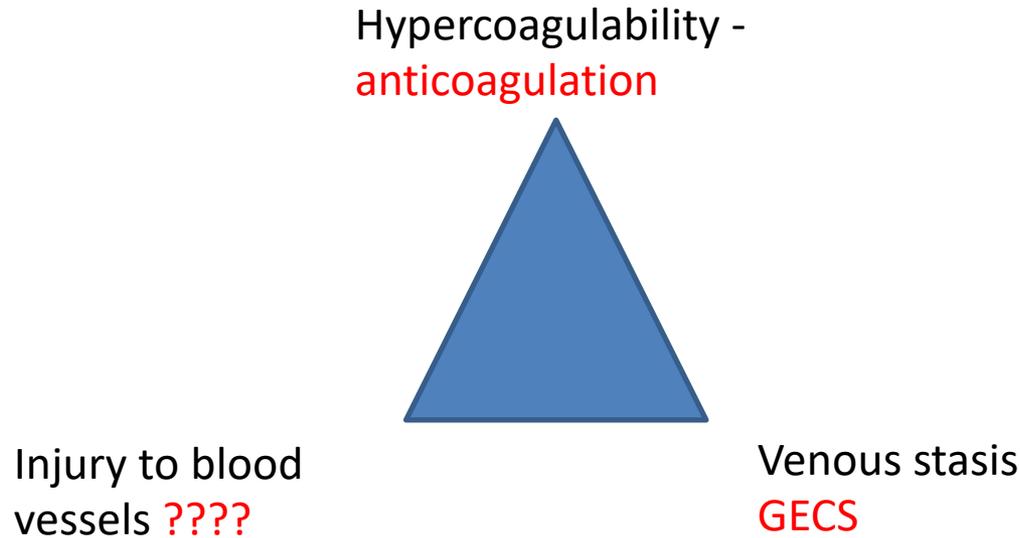
Ultrasound-enhanced, catheter-directed thrombolysis for deep vein thrombosis (IPG523)

This procedure should only be used with special arrangements for clinical governance, consent and audit or research.

Percutaneous mechanical thrombectomy for acute deep vein thrombosis of the leg (Due May 2019)

In consultation, likely to be similar

Thinking about Virchow's triad



Injury to the blood vessels has been 'side-lined'
May Thurner syndrome

Remember

30% patients with DVT have PTS

50%- 60% of patients with iliofemoral DVT have PTS

Other Treatments

Surgical by-pass surgery

Few patients and not great outcomes

Catheter Directed Thrombolysis

Reduces clot size and thus symptoms

Thought would reduce PTS – not in reality

Surgical Thrombectomy

For those who could not have thrombolysis

For those in whom thrombolysis is ineffectual

Further treatment for iliofemoral DVT to prevent Venous incompetence

- Insertion of stents is not a new procedure – first reports from Germany, Sweden and the USA in the early 1990s
- Last five years – emergence of a new era
- Many variables– how to assess severity – difference between Villata and Ginsberg clinical scales – Susan Kahn 2006 JTH
- Compliance with anticoagulation/GECS

Options for treatment of iliofemoral DVT

Interventions
for iliofemoral
DVT

Catheter directed
thrombolysis

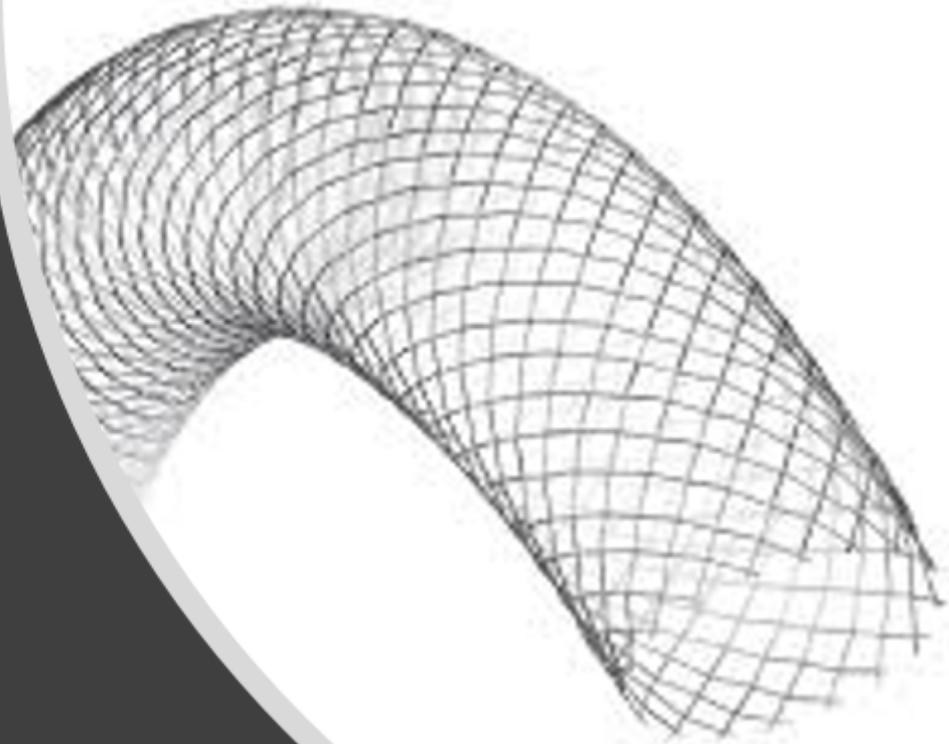
Pharmaco-mechanical
thrombectomy

Mechanical
thrombectomy

Stents

Original options
limited

- Wallstent
- Arterial Stents - small diameters
- High radial force does not imply crush resistance



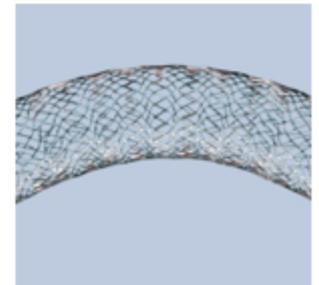
Evolving stents

New Dedicated Venous Stents

- Optimed
- Cook
- Veniti

- Bard
- Medtronic

- Boston Scientific



Food for thought:

- Migration of Iliac Vein Stents to the Heart
 - Case study and review in 2017 in Vascular Disease and Management
 - Report on 2 cases
 - Rare but life threatening condition

The future looks bright

- Careful selection of patients with:-

Iliofemoral DVT

PTS and chronic venous insufficiency

If seen in thrombosis clinics, vascular clinics

Refer to a centre where vascular stenting is taking place

Dublin - Gerry O'Sullivan

Daily Main interpretation

- **Each year, one in every 1,000 Britons develops deep vein thrombosis - a blood clot in a large vein. This can cause permanent vein damage, raising the risk of further clots. Andrea Fernandez, 25, a communications assistant from Brixton, South London, was the first person in the world to undergo a new treatment to reduce the symptoms and prevent a second DVT, as she tells SOPHIE GOODCHILD.**

