VŠEOBECNÁ FAKULTNÍ NEMOCNICE V PRAZE

1. LÉKAŘSKÁ FAKULTA Univerzita Karlova

NOVINKY V ENDOVASKULÁRNÍ LÉČBĚ DVT

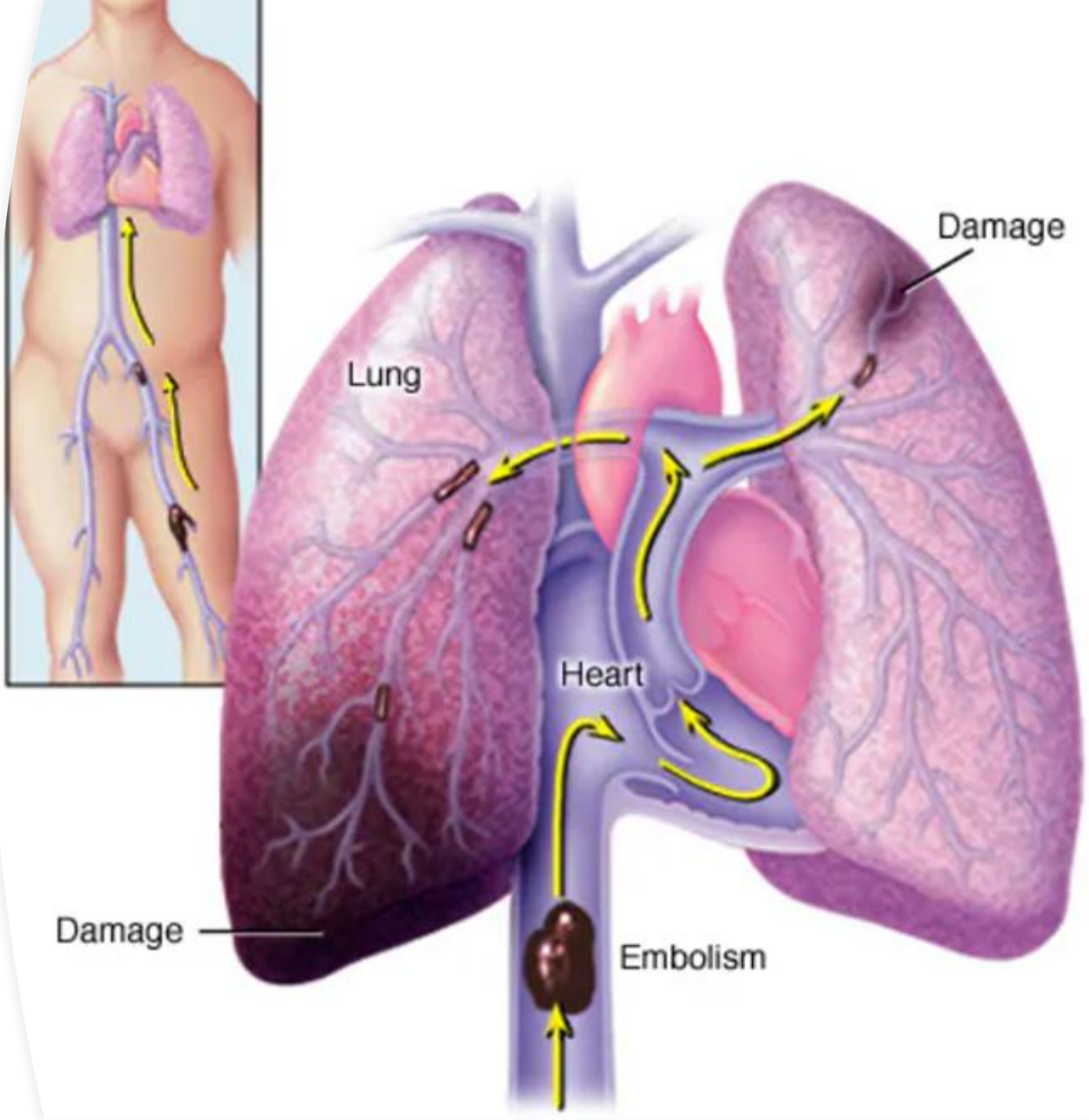
Petr Vařejka a kol.

KOMPLEXNÍ KARDIO VASKULÁRNÍ CENTRUM VFN Praha

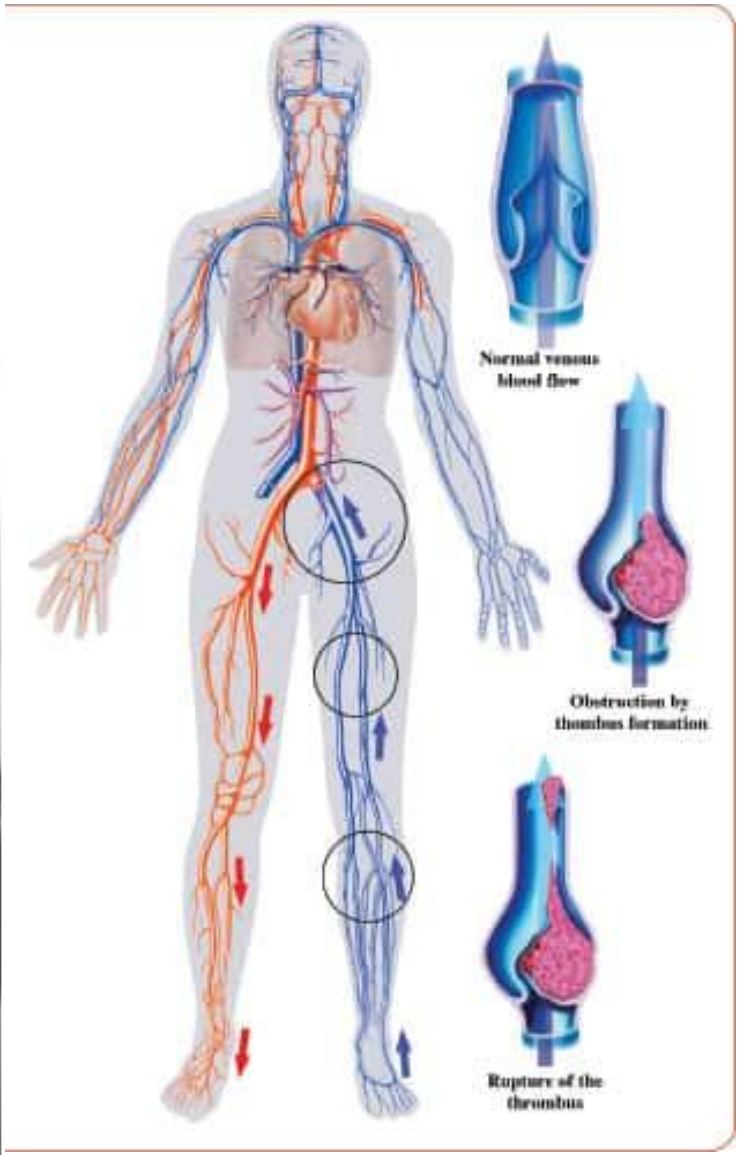
NÁRODNÝ ÚSTAV SRDCOVÝCH A CIEVNYCH CHORÔB, A.S.

AKUTNÍ DVT TERAPIE

- Snížit riziko akutní komplikace – PLICNÍ EMBOLIE
- Zastavit progresivní růst koagula – rozsah trombózy
- Úleva od symptomů – okamžitý dopad na kvalitu života
- Snížení rizika pozdních komplikací



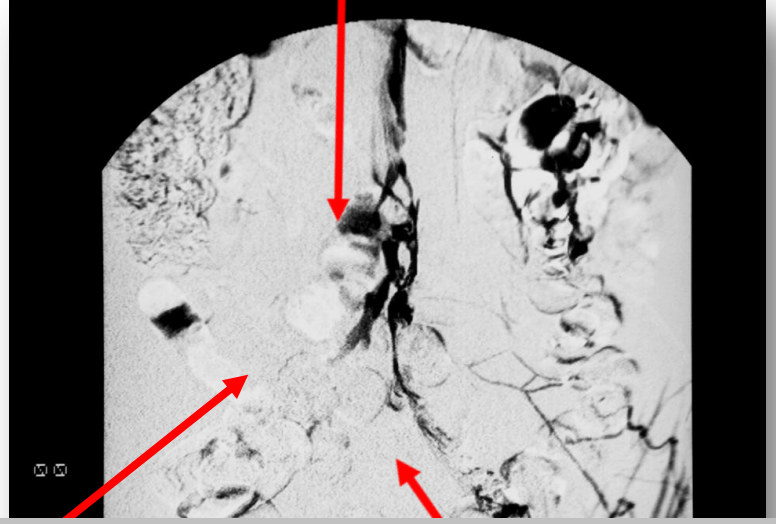
AKUTNÍ DVT TERAPIE



Proč selhává AK a chirurgická léčba?

- V nízkoprůtokovém řečišti antikoagulace nedokáže plně odstranit trombus (> 8mm)
- Endogenní TL je nízká
- Organizace trombu s okluzí žíly a s poškozením chlopní
- „underlying lesions“ nedotčeny (MTS)
- PSTsy vzniká mezi 70-90%

Prandoni P, Ann Intern Med 1996, 125: 1-7,
Akesson H, Eur J Vasc Surg 1990,4:43-48



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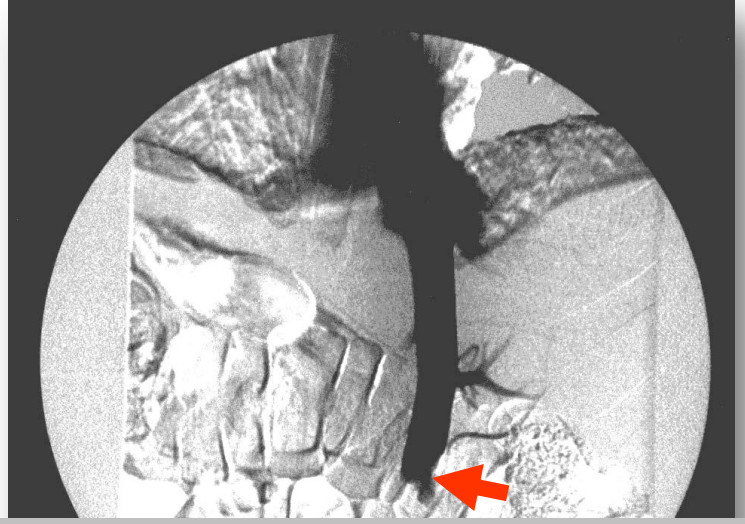
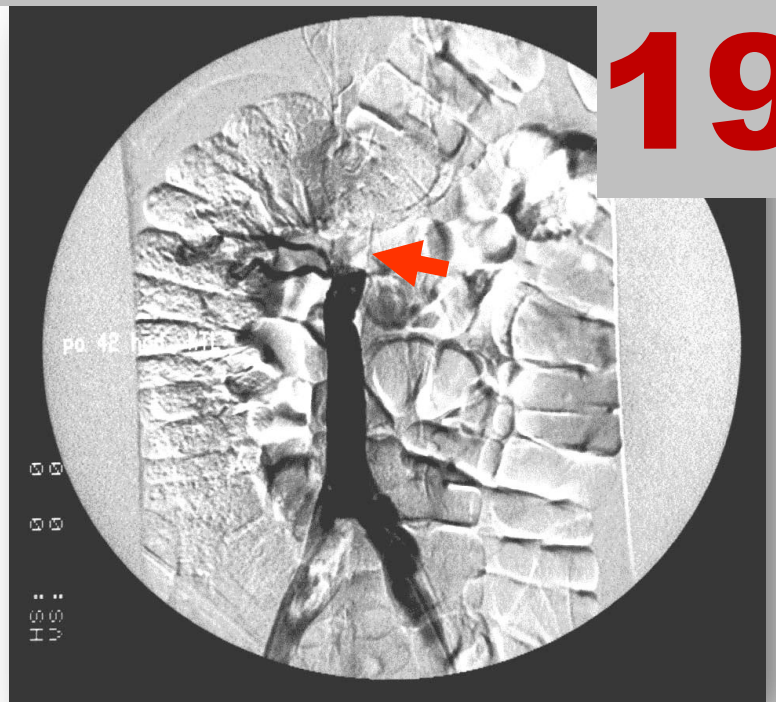


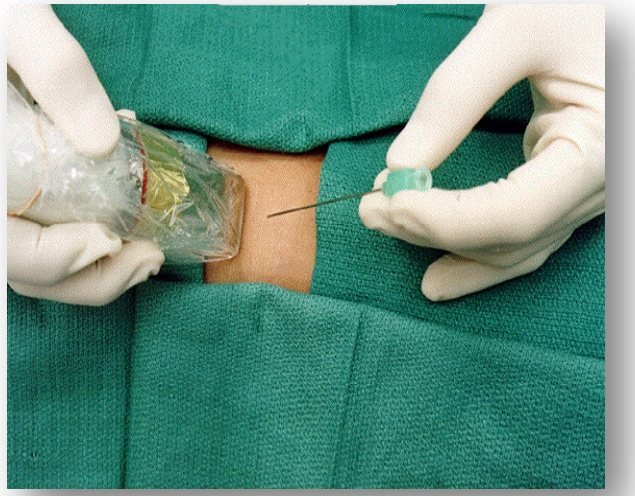
2. interna VFN PRAHA

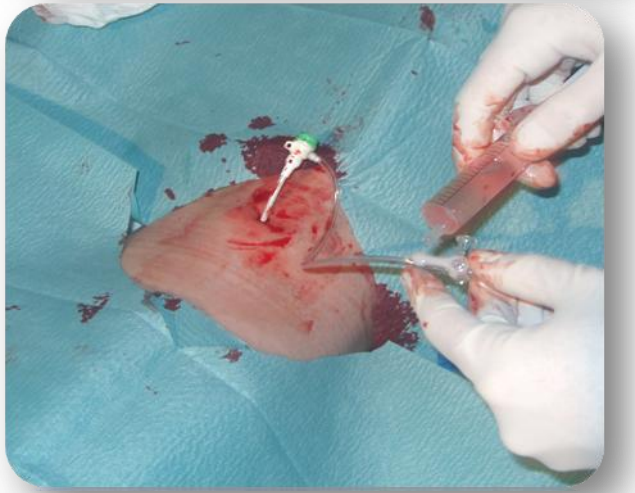
1998

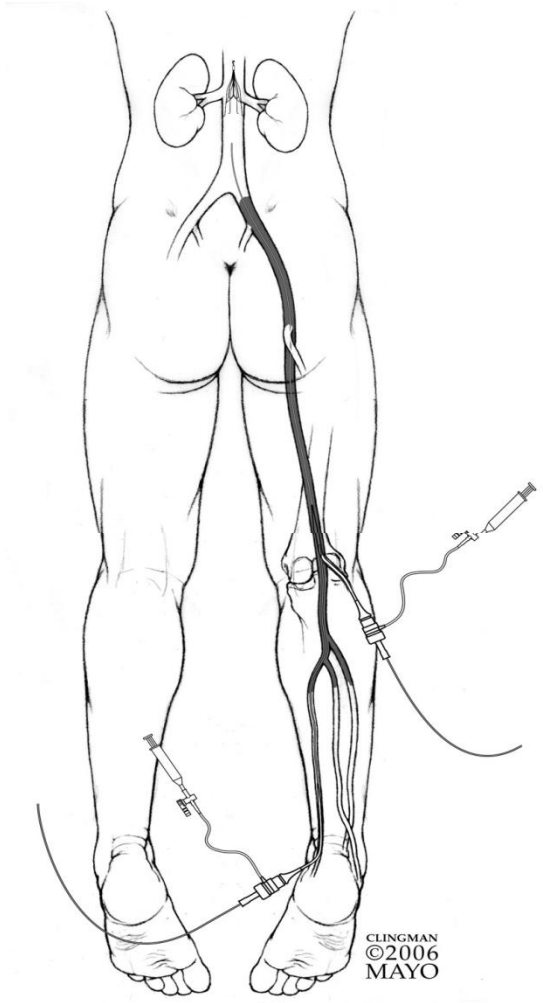


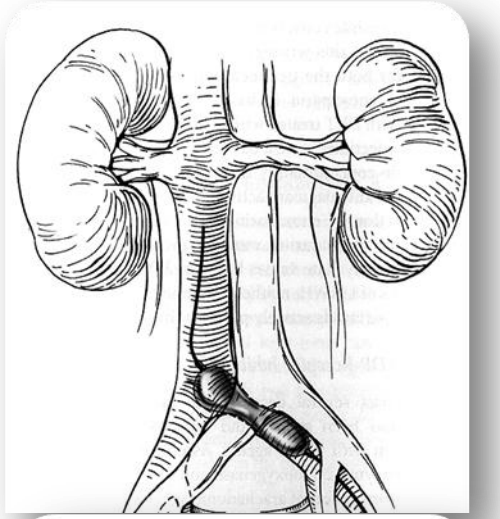
12.09.2025

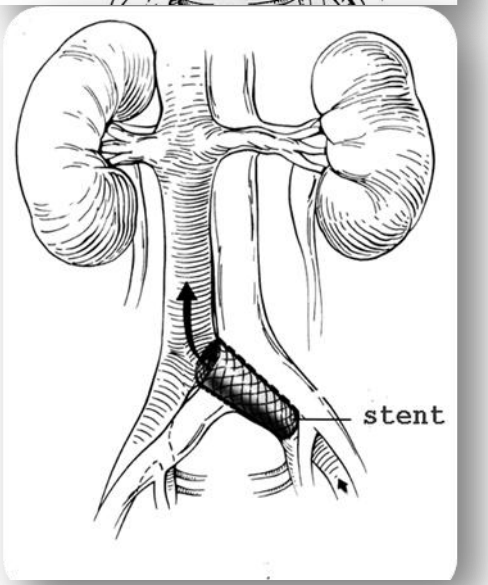
ENDOVASKULÁRNÍ LÉČBA









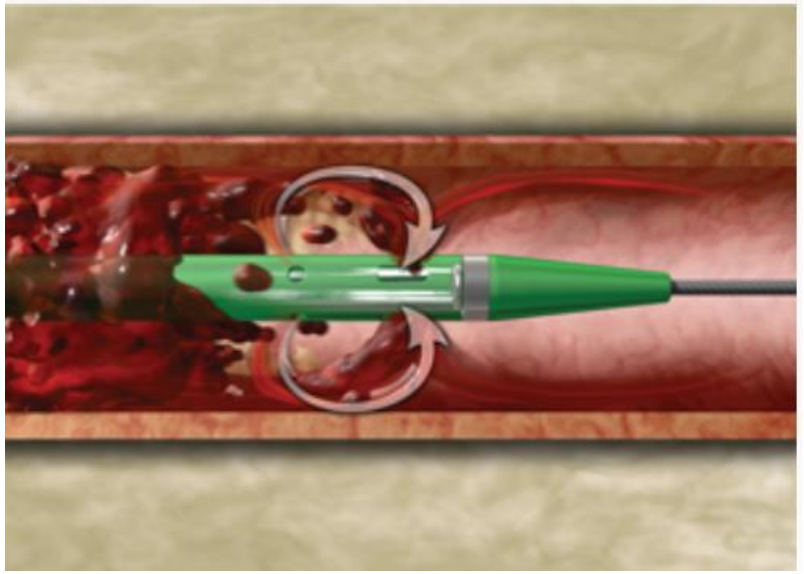


www.rochestermagazine.com/carl/**clingman**/story-668.html

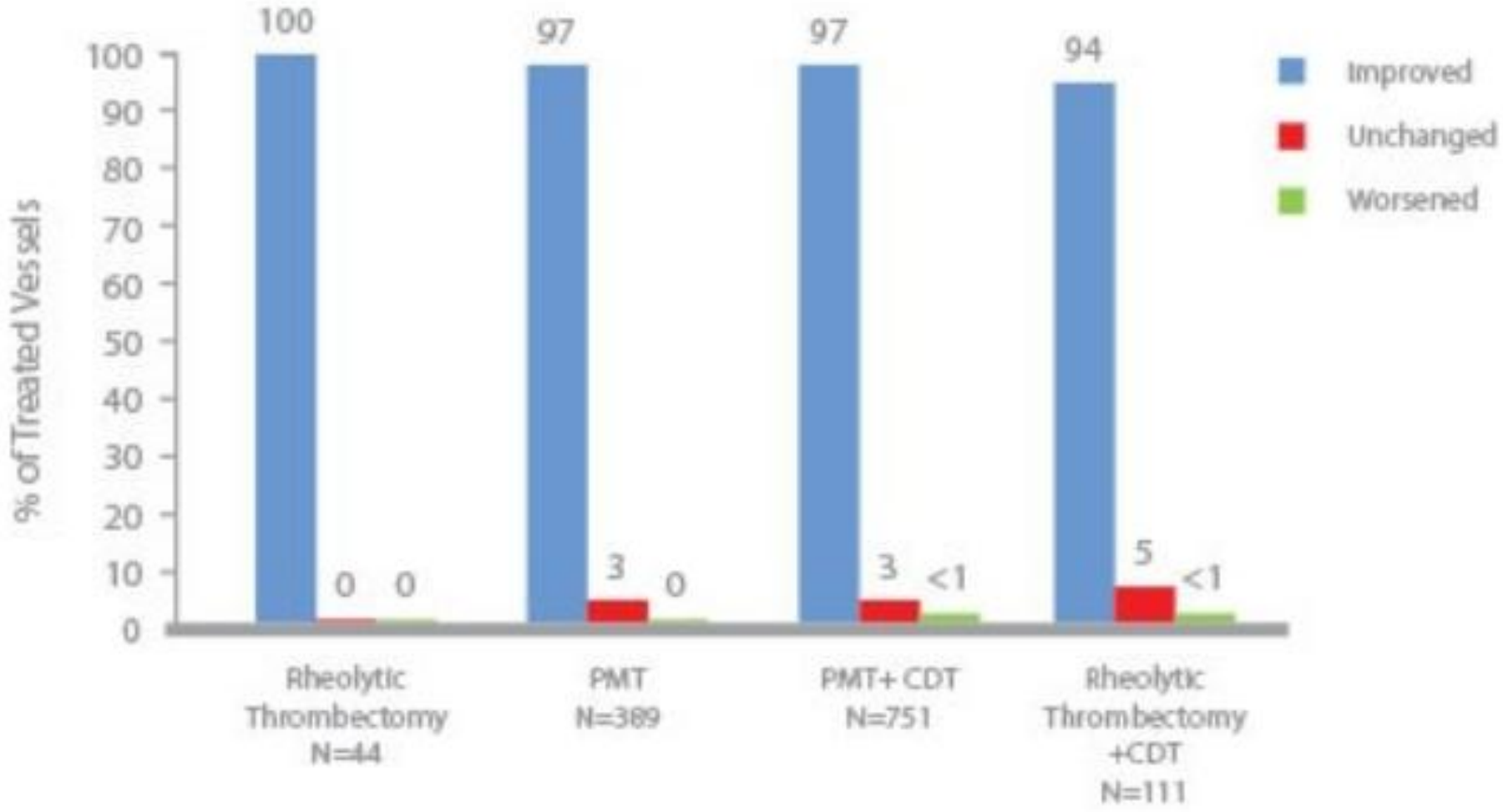
Možnosti endovaskulární léčby DVT

- Lokální intravenózní trombolýza
- Farmakomechanická trombektomie
  - AngioJet
- Perkutánní mechanická trombektomie
  - Rotarex, Aspirex, Trerotola
  - Inari
- Aspirační trombektomie
  - Penumbra Lightning
- PTA a implantace stentu
  - IVUS guided intervence

FARMAKOMECHANICKÁ TROMBEKTOMIE ANGIOJET

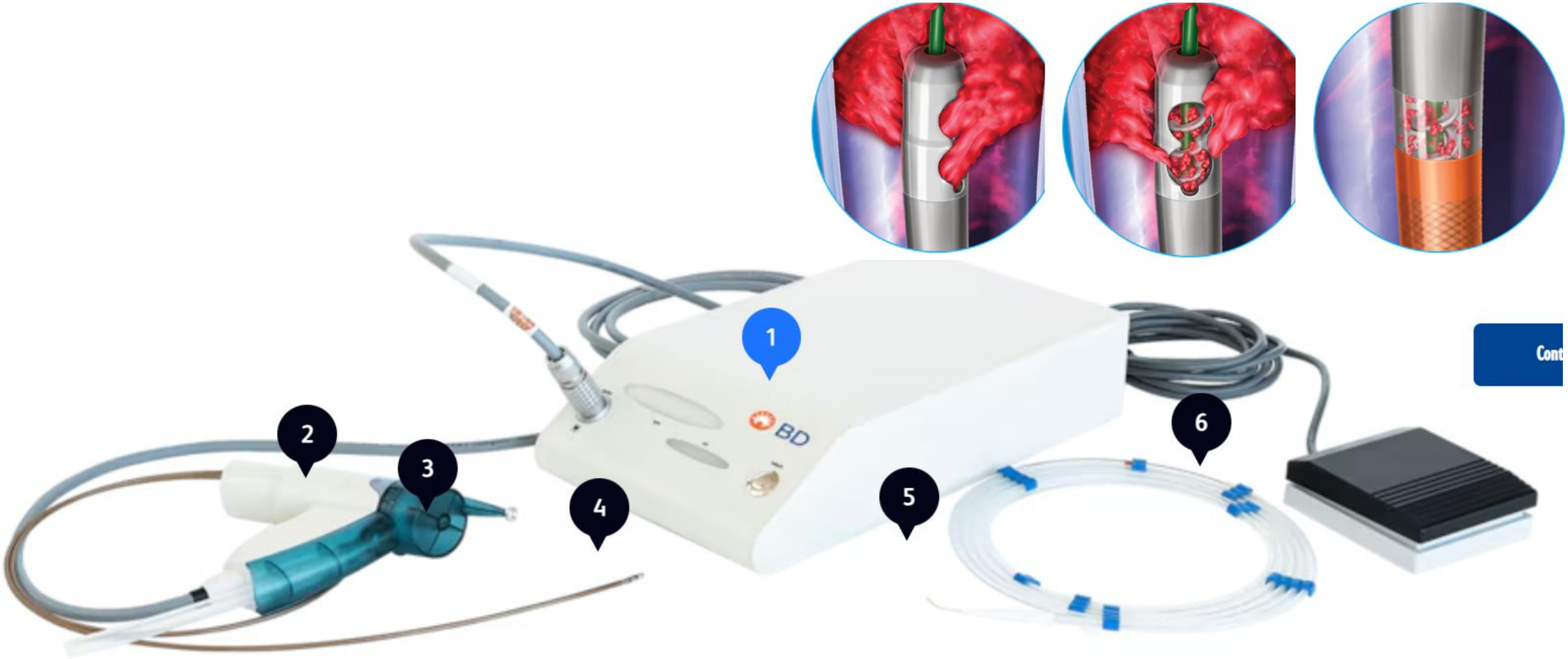


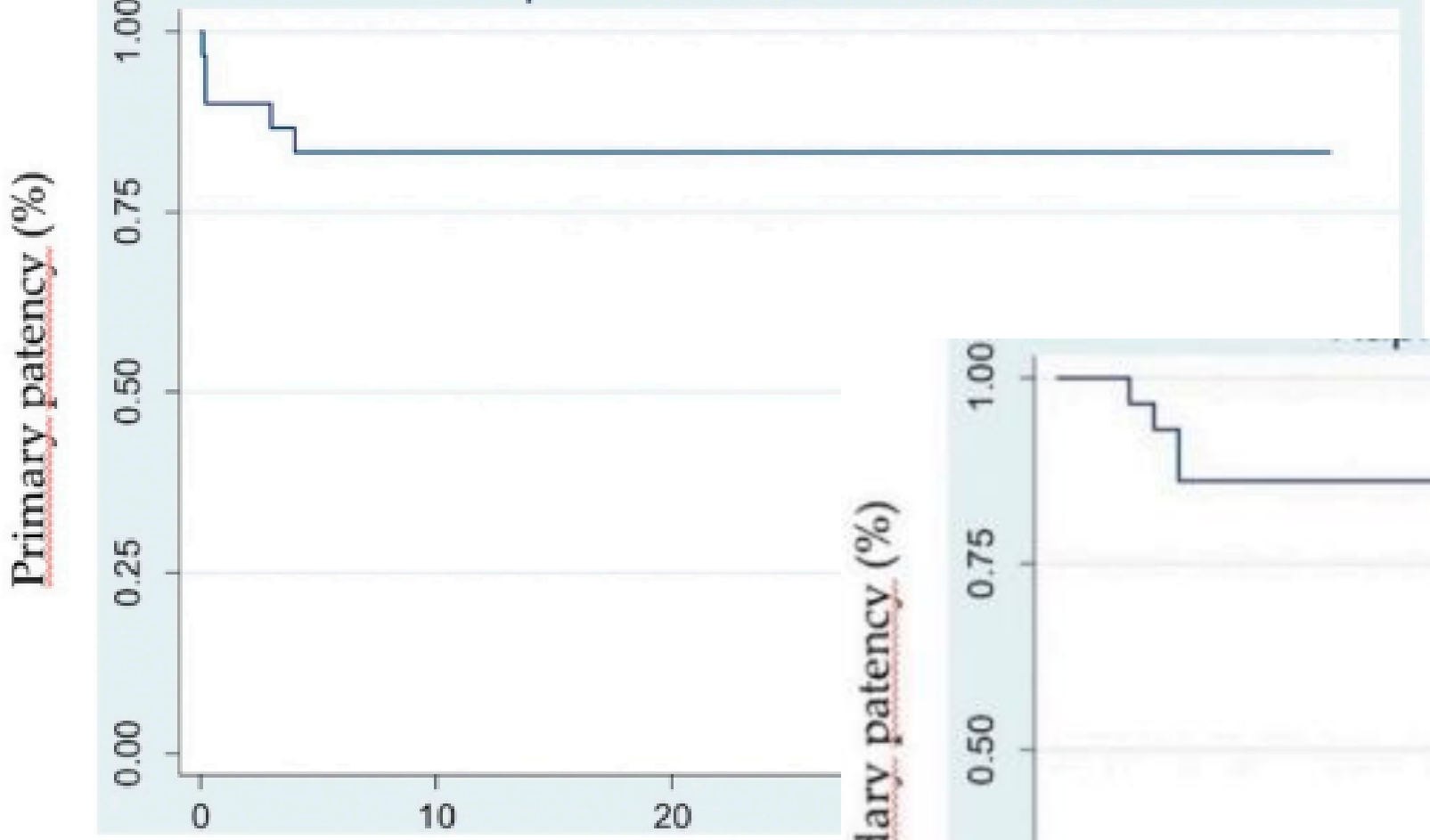
PEARL DVT
N=371/1295

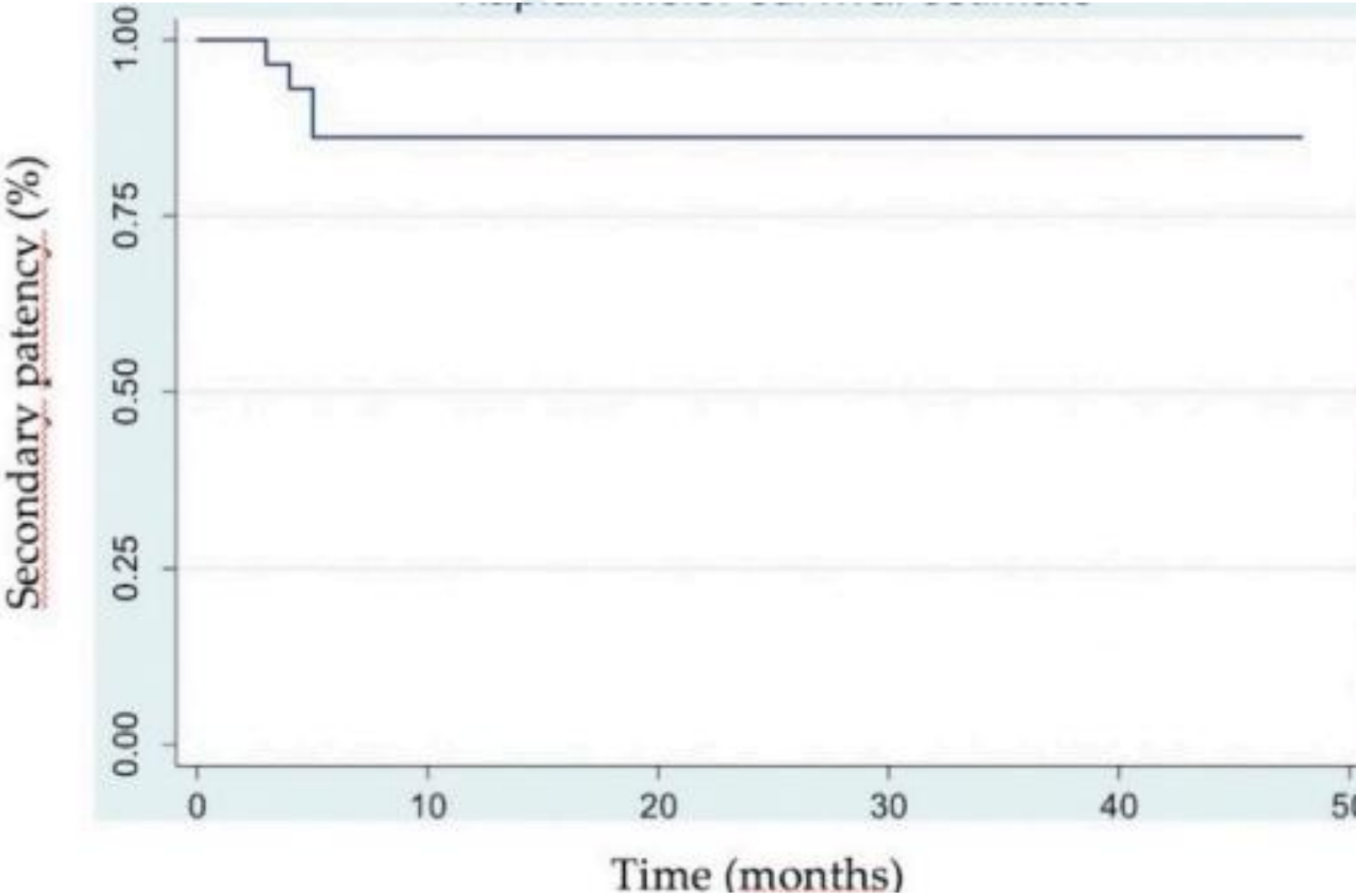


Kakkos SK, Haddad GK, Haddad J, Scully MM. J Endovasc Ther. 2008;15(1
Simoni. PEARL Registry Hemodialysis Access. VEITH 2013.

PERKUTÁNNÍ MECHANICKÁ TROMBEKTOMIE
ROTAREX, ASPIREX




Primary patency (%)
0.00
0.25
0.50
0.75
1.00
0
10
20
Time (mon


Secondary patency (%)
0.00
0.25
0.50
0.75
1.00
0
10
20
30
40
Time (months)

MECHANICKÁ TROMBEKTOMIE
INARI

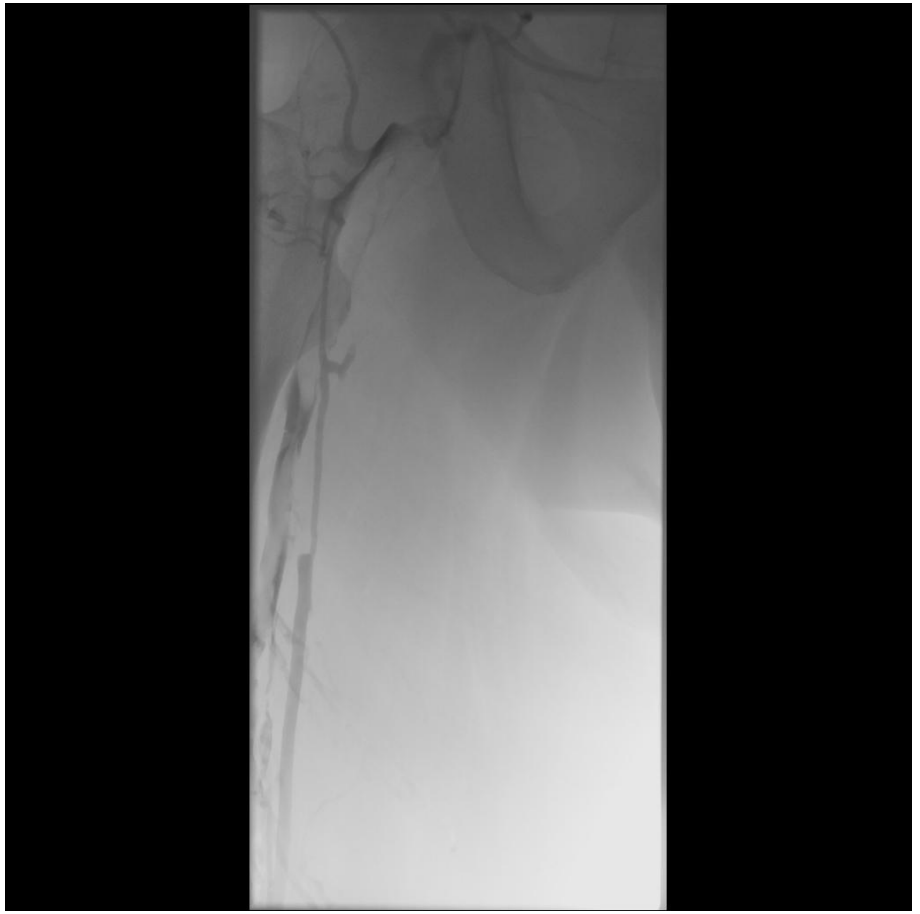
MECHANICKÁ TROMBEKTOMIE
INARI

VÝHODY

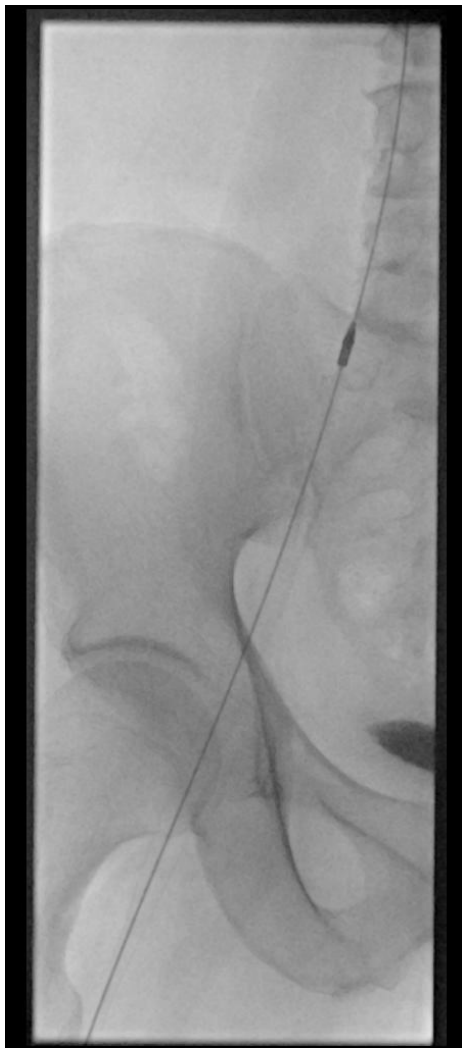
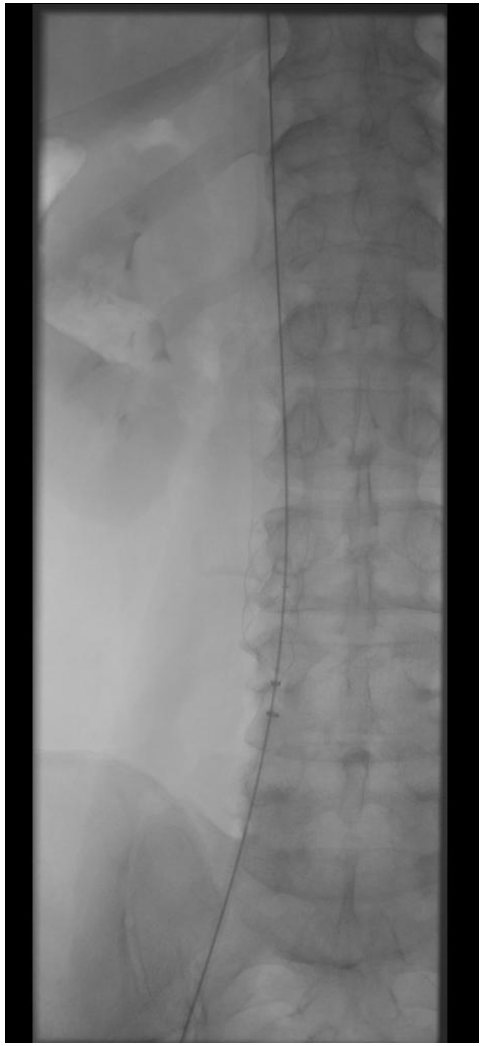
- jednorázový zákrok v LA
- bezpečný
  - nízké riziko plicní embolie
- bez nutnosti podání lokální TL
  - vhodné pro pacienty se zvýšeným rizikem krvácení
  - zkrácení doby hospitalizace
- rychlá úleva od potíží

Kazuistika

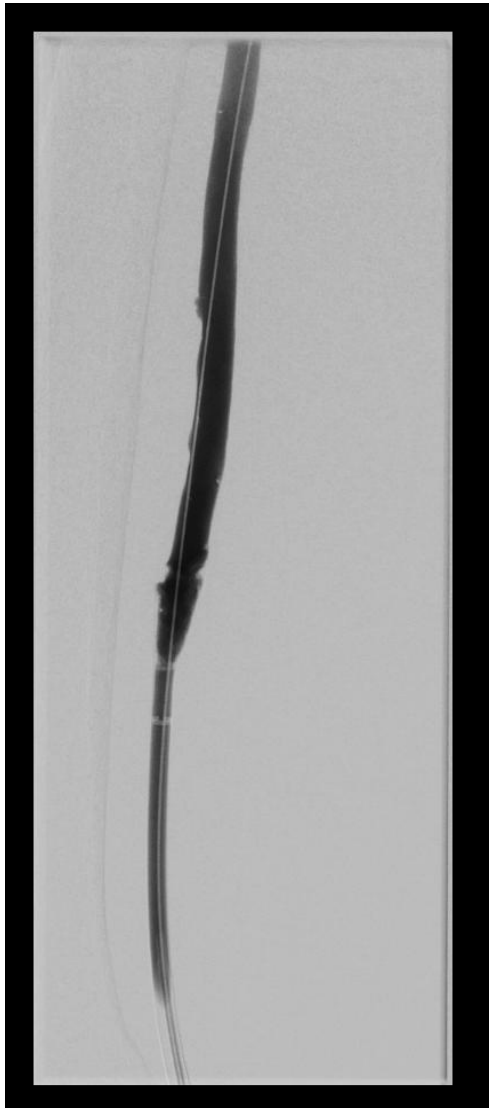
- 55letý pacient s akutní ileo-femoro-popl. trombózou PDK

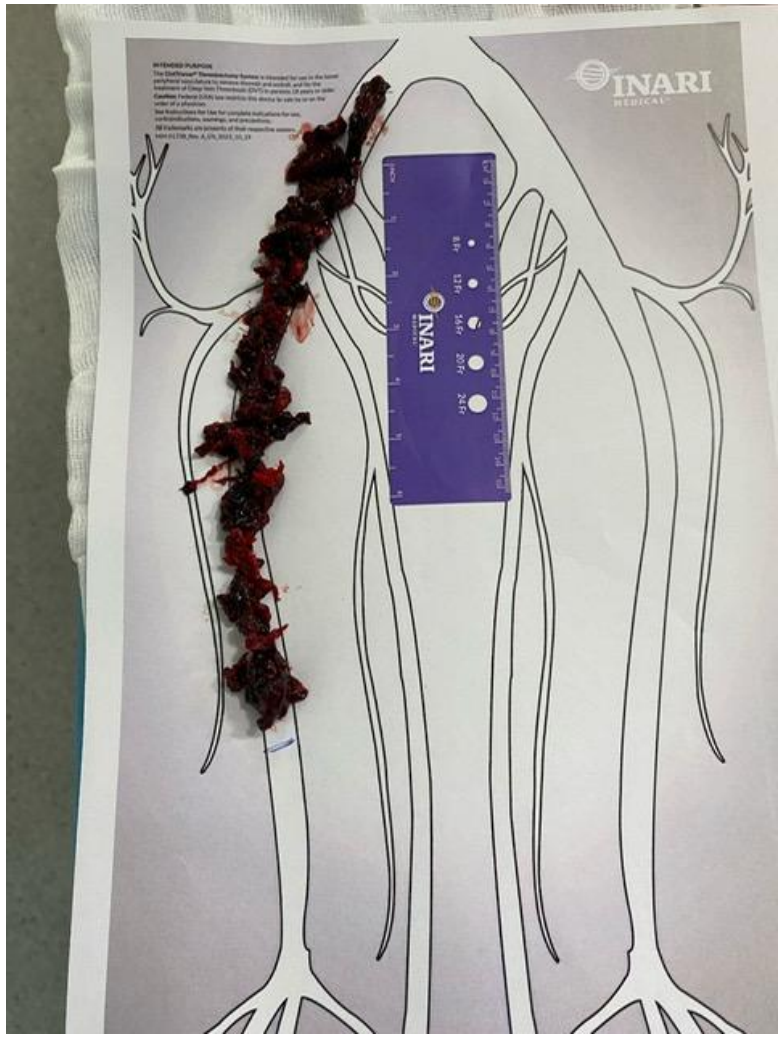


Kazuistika

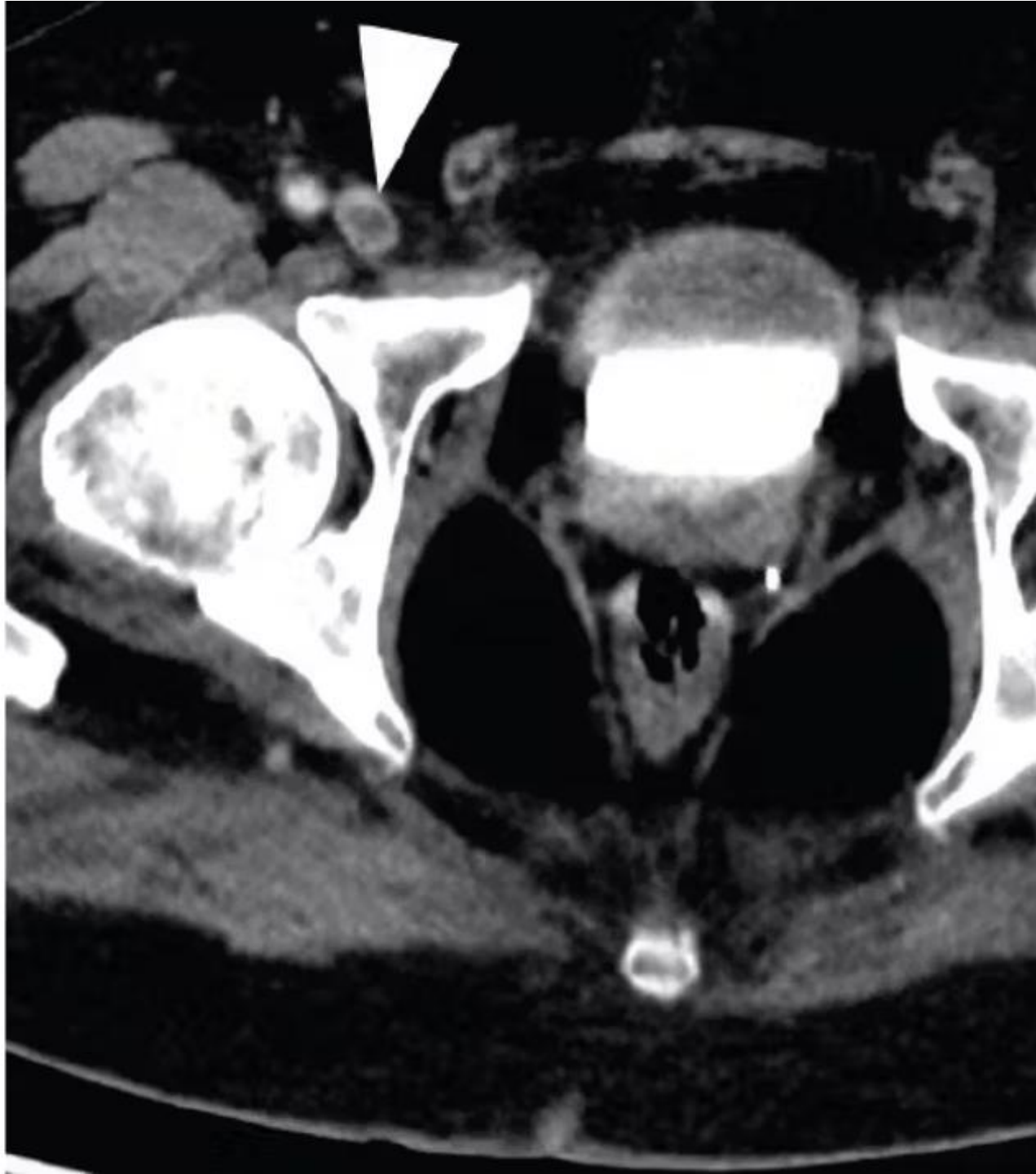




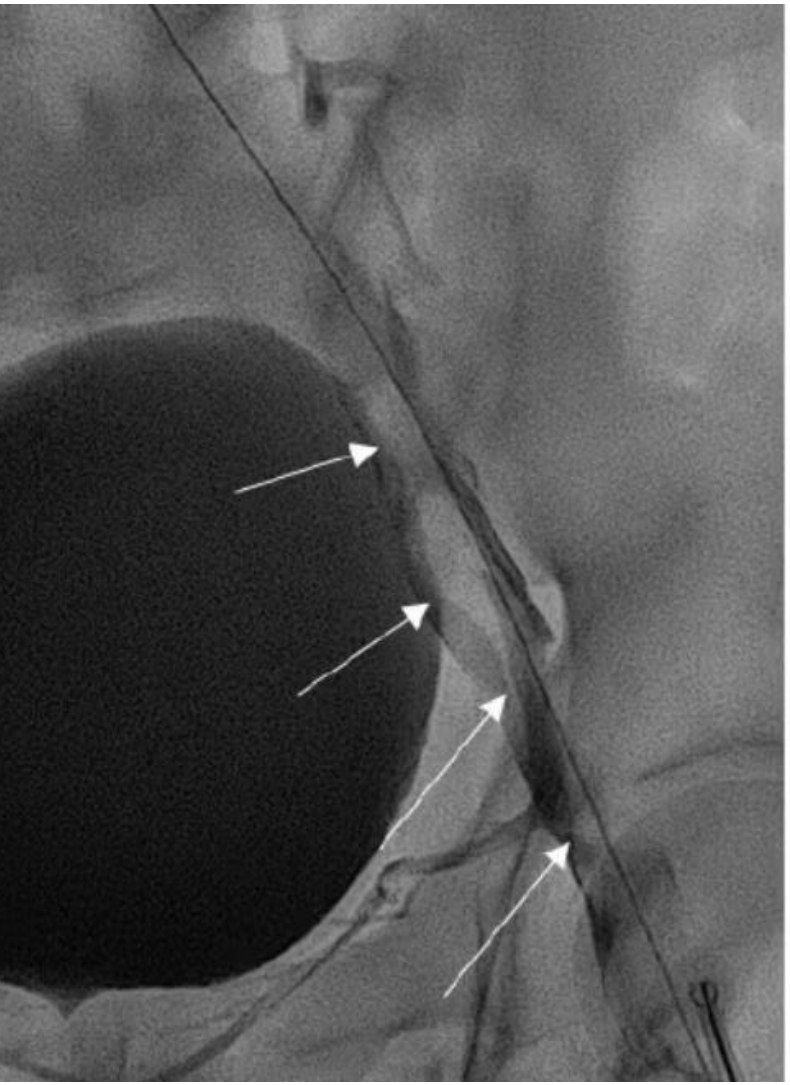

Kazuistika

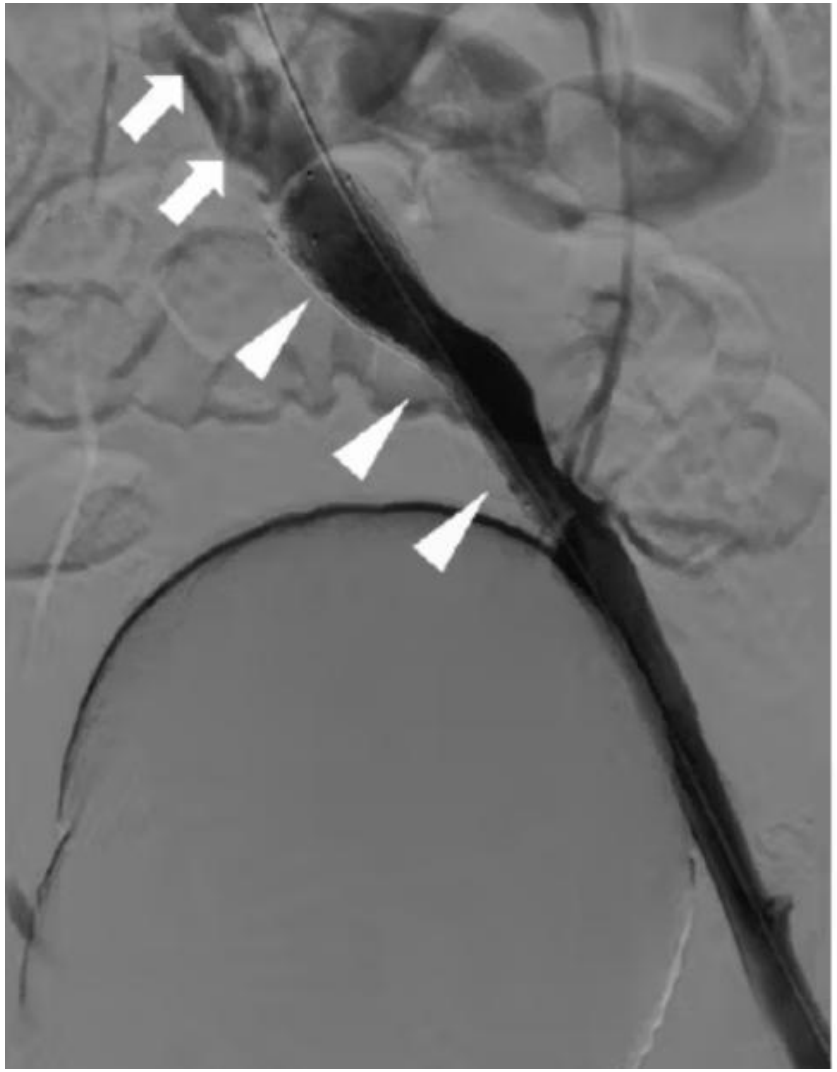


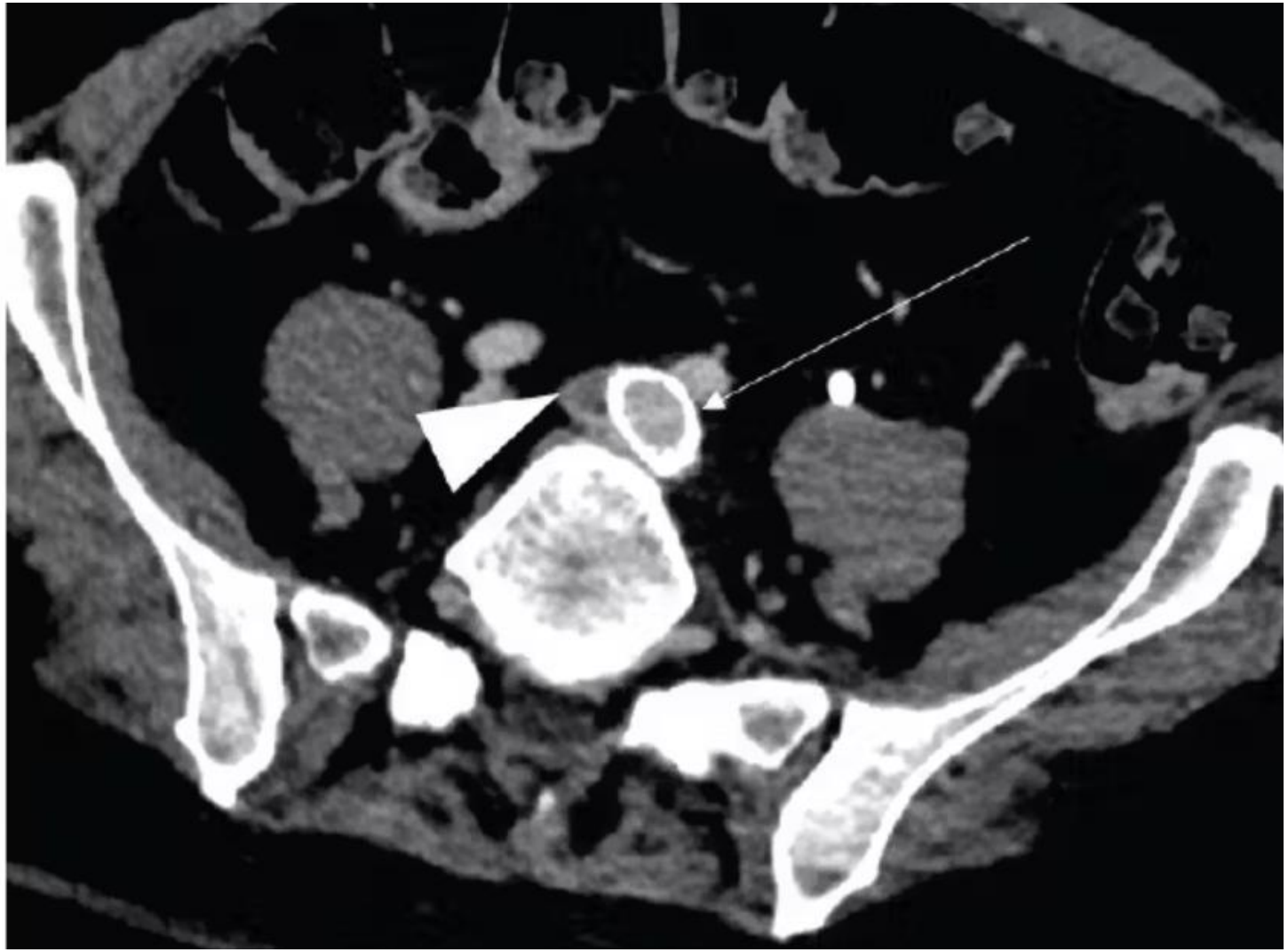

INARI
MEDICAL
INARI
8Fr
12Fr
16Fr
20Fr
24Fr

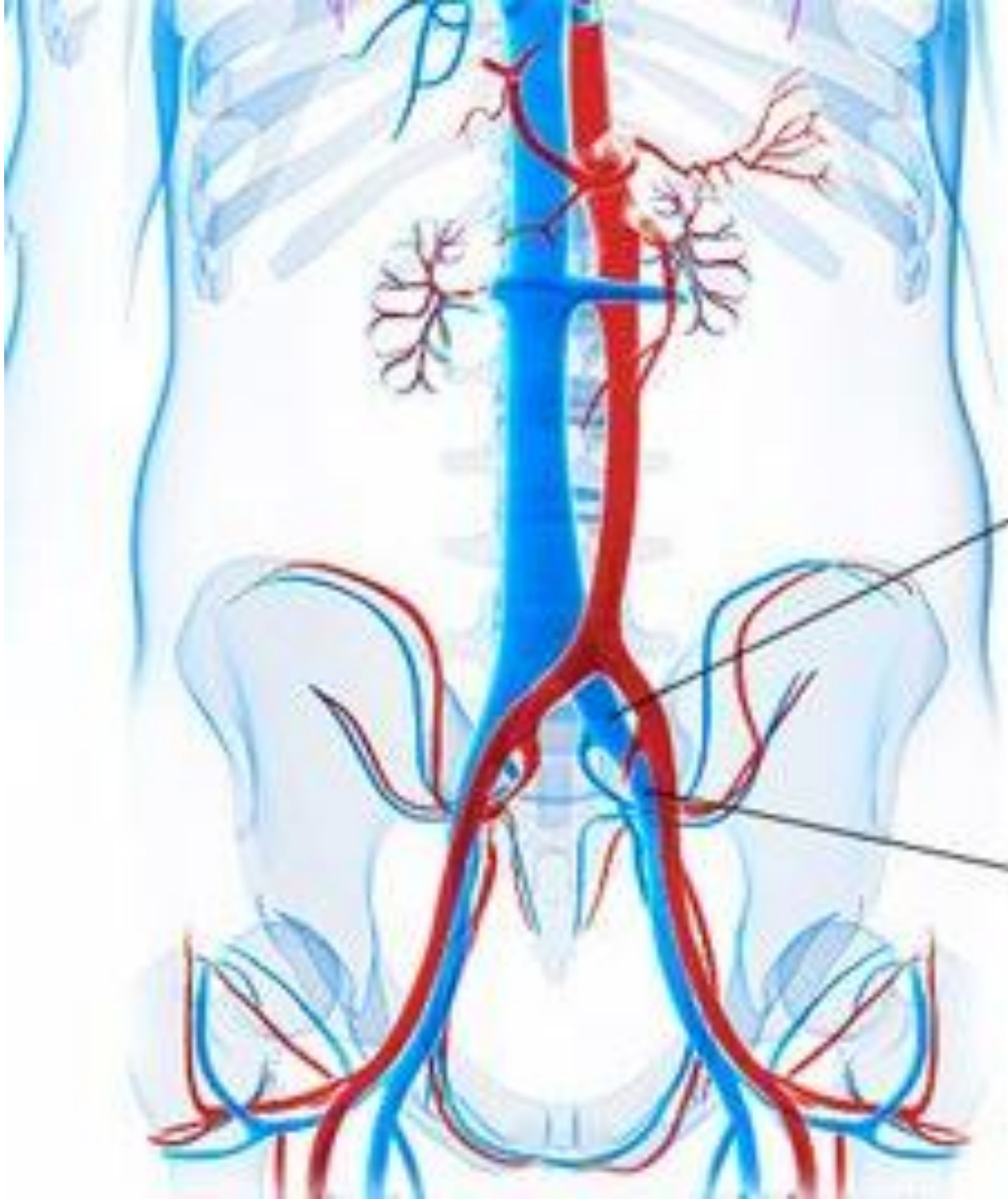
ASPIRAČNÍ TROMBEKTOMIE PENUMBRA LIGHTNING





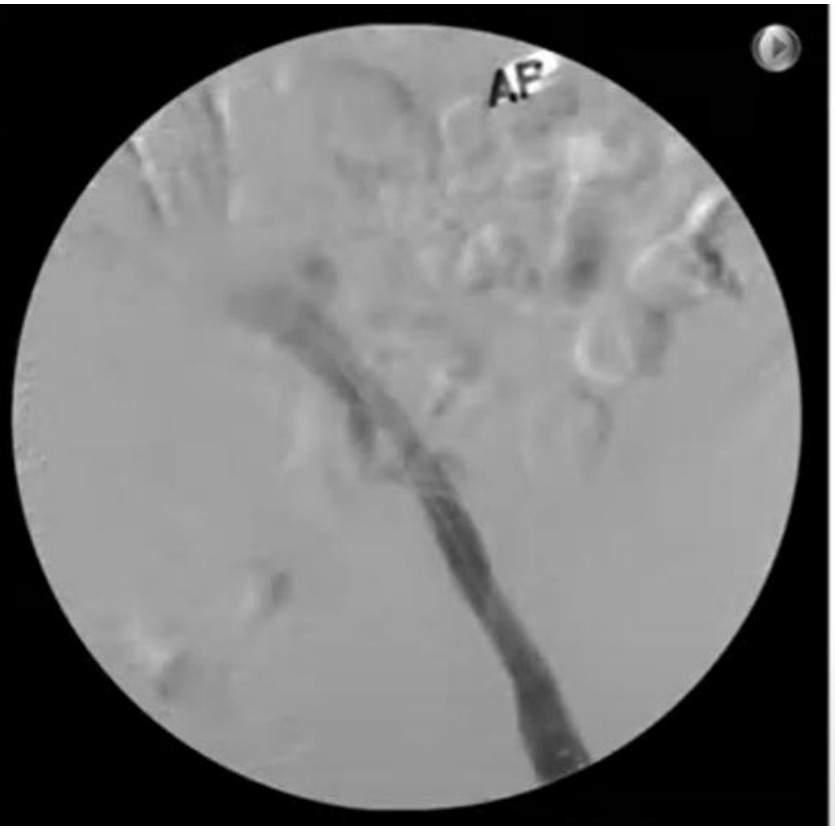






Normal
Iliac Vein

Compressed
Iliac Vein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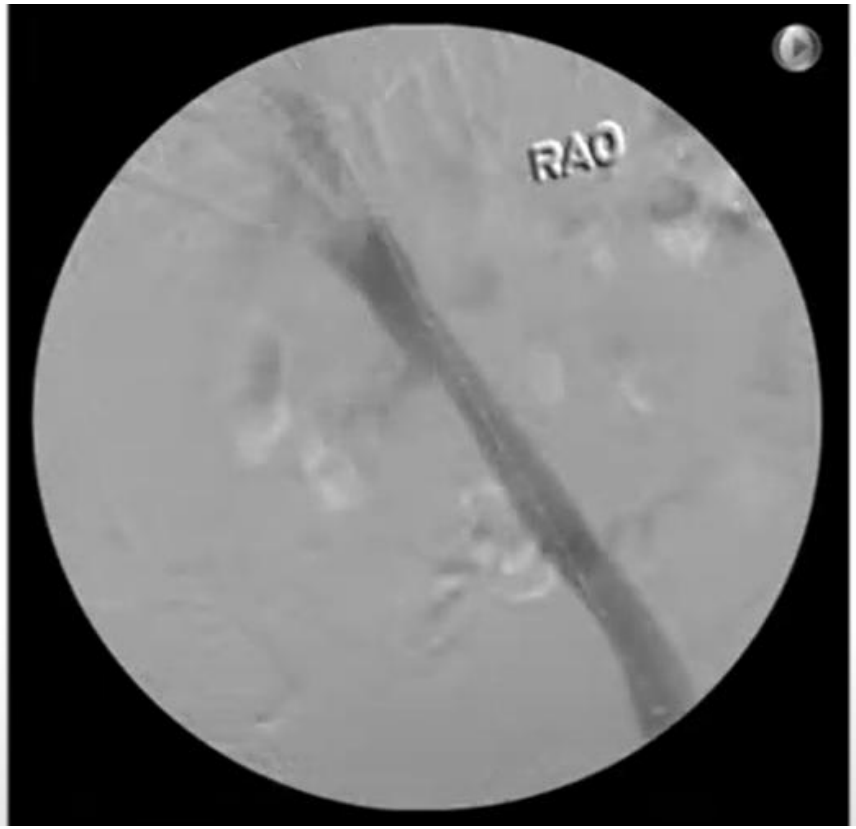
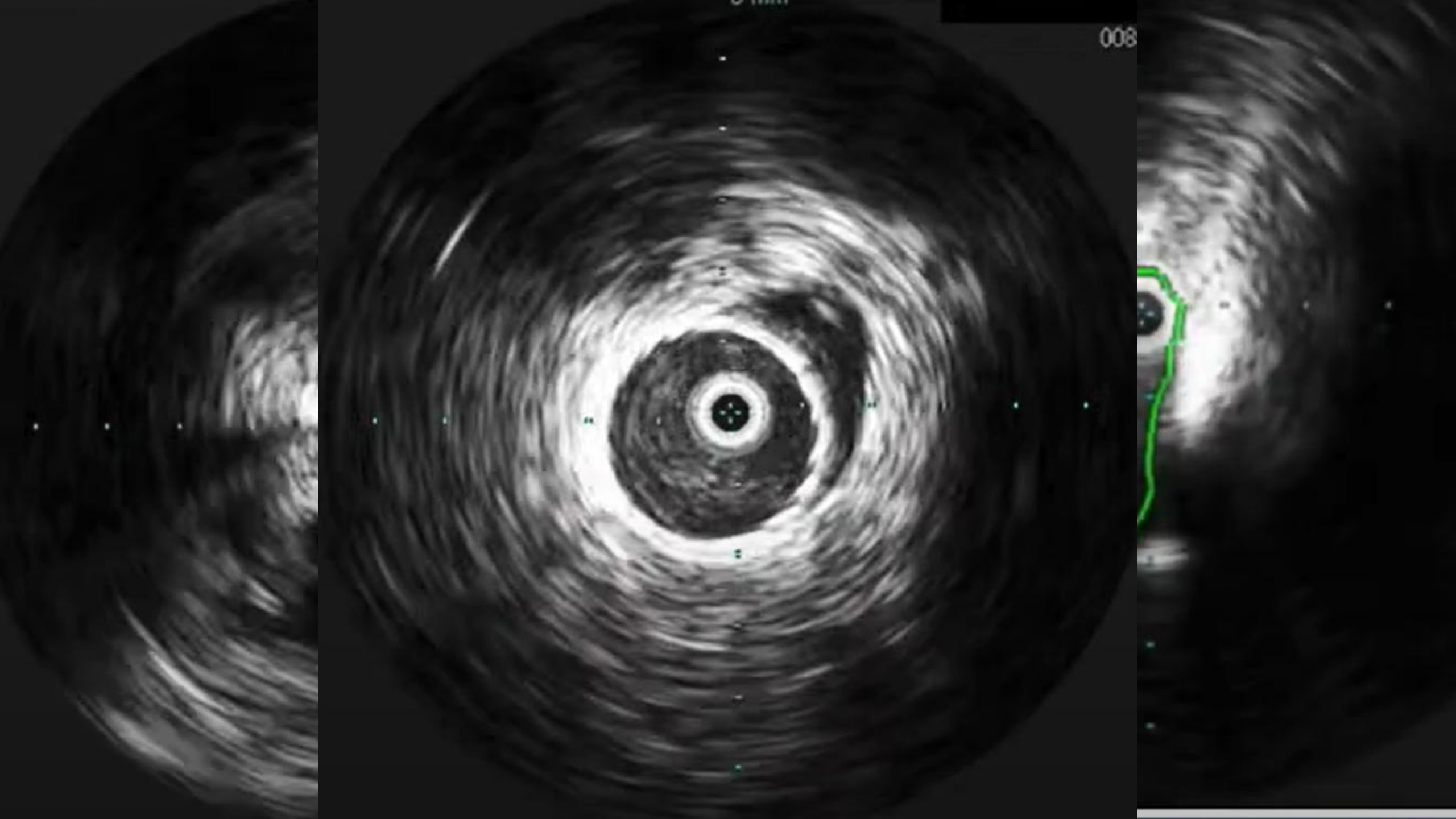

RAO


LAO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Vasc Med. 2021 December ; 26(6): 662–669. doi:10.1177/1358863X211042930.

Catheter-Directed Thrombolysis for Deep Vein Thrombosis: 2021 Update

Samuel Z. Goldhaber[1], **Elizabeth A. Magnuson**[2], **Khaja M. Chinnakondepalli**[2], **David J. Cohen**[3,4], **Suresh Vedantham**[5]

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Key Points to Remember

1	Anticoagulant therapy prevents pulmonary embolism and recurrent venous thromboembolism (VTE) in patients with DVT, and is the mainstay of therapy.
2	In addition to preventing recurrent DVT, ensuring good early and late symptom control is an important patient-centered goal of DVT treatment.
3	Post-thrombotic syndrome (PTS) occurs in 40% of patients after lower extremity DVT.
4	Patients with iliofemoral DVT, defined as DVT involving the iliac and/or common femoral vein, experience more PTS, more severe PTS, and more recurrent VTE.
5	Catheter-directed thrombolysis (CDT) should not be routinely used for proximal DVT since it does not prevent PTS and does increase bleeding.
6	Patients with acute iliofemoral DVT, good functional status, and low risk for bleeding should be considered for CDT since it reduces early leg pain and swelling and late PTS severity.
7	Elderly patients (> 65 years old) will experience worse efficacy and safety with CDT.
8	Inferior vena cava filters are usually not needed for CDT. If a filter is placed, it should be removed as soon as possible after the procedure.
9	Diligent anti-thrombotic therapy is needed after CDT to prevent recurrent DVT.

Cochrane Library

Cochrane Database of Systematic Reviews

Thrombolytic strategies versus standard anticoagulation for acute deep vein thrombosis of the lower limb (Review)

Broderick C, Watson L, Armon MP

www.cochranelibrary.com

- 19 RCTs, 1943 pts
- Mírná redukce výskytu PTS
  - 49,6 vs 52,8%
- Krvácení
  - 6,7 vs 2,2%

Cardiovasc Intervent Radiol (2023) 46:1571–1580
https://doi.org/10.1007/s00270-023-03509-8

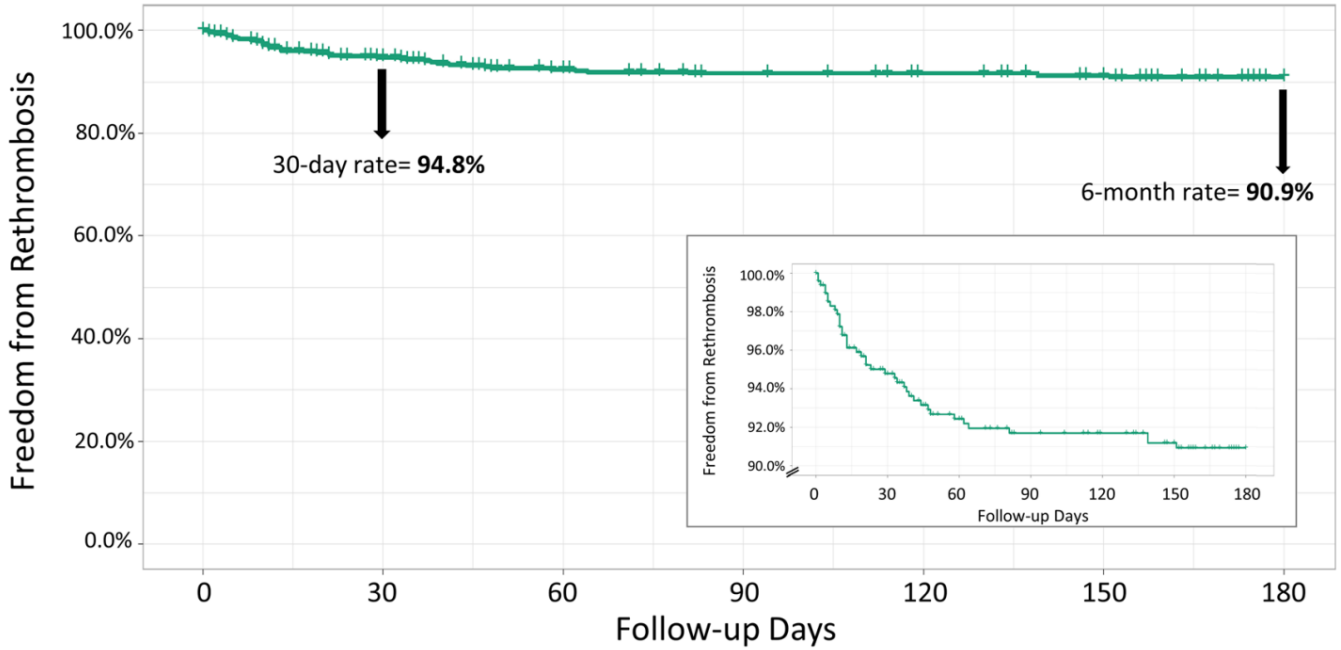
CIRSE

Check for updates

CLINICAL INVESTIGATION VENOUS INTERVENTIONS

Six-Month Outcomes of Mechanical Thrombectomy for Treating Deep Vein Thrombosis: Analysis from the 500-Patient CLOUT Registry

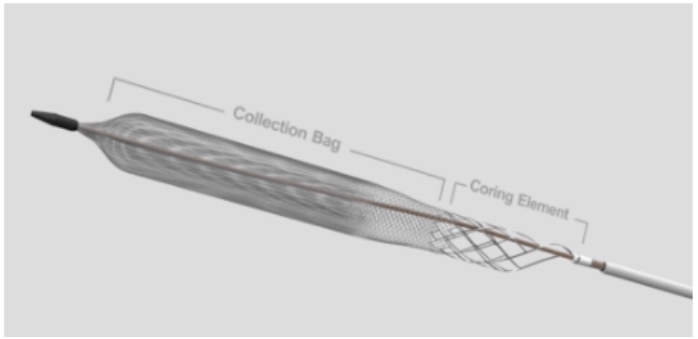
- Prospektivní multicentrický registr
- 500 pacientů
- Akutní, subakutní i chronické DVT
- 7% PTS



INTERVENTIONAL NEWS

Inari Medical announces randomised controlled trial evaluating clinical outcomes of the ClotTriever system in DVT

31st August 2022



Inari Medical has announced planned enrolment of the DEFIANCE randomised controlled trial (RCT), which is designed to compare the clinical outcomes of patients with iliofemoral deep vein thrombosis (DVT) treated with the ClotTriever system versus anticoagulation only.

Most read

DOPORUČENÍ 2025

2025 ESVM Guidelines on interventional treatment of venous thromboembolism

Vasa (2025), 54 (6), 365–381

Recommendations for interventional therapy of acute DVT

Recommendation	Class of recommendation	Level of evidence
In patients with severe symptoms due to iliofemoral and/or iliocaval location of acute DVT CBT should be considered [14, 15, 18, 19, 20, 23, 24].	IIa	A
The involvement of a vascular expert in the decision-making process and the periinterventional management of patients undergoing CBT is recommended.	I	C
It is recommended that interventionalists with expertise in endovascular treatment of iliofemoral and/or iliocaval obstructions are involved in CBT of DVT.	I	C
For endovascular treatment of acute DVT the use of catheter-based mechanical thrombectomy should be preferred over CDT or USAT [32, 33].	IIa	B
For endovascular treatment of acute DVT the use of intravascular ultrasound should be considered to assess the presence of residual iliofemoral/iliocaval obstructions after CBT and to guide stent placement [25, 26, 27].	IIa	B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