

# **Indian Panorama of PCI Venous Stenting: Lessons From a Large Interventional Series**

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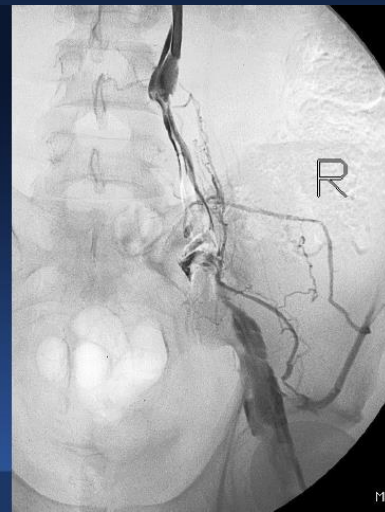
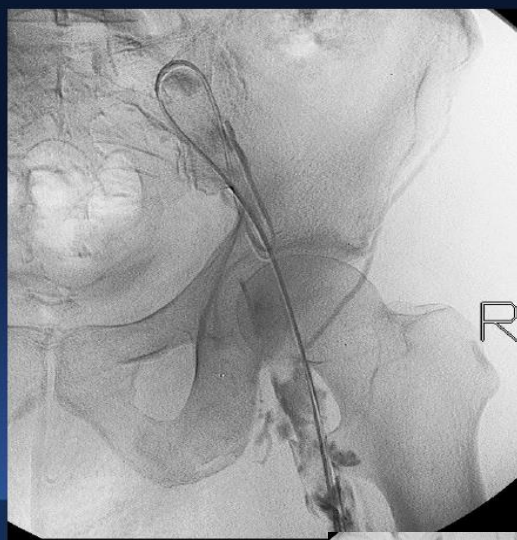
***Chairman – Asia Pacific Vascular Society***

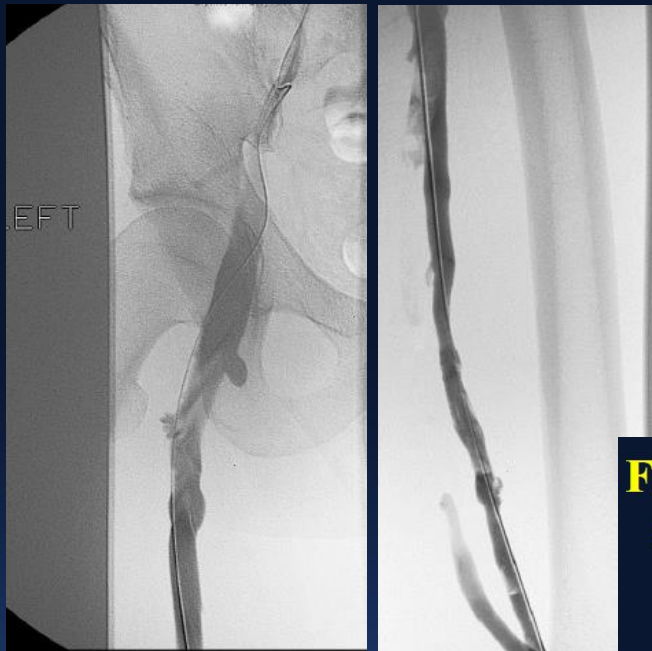
***Indraprastha Apollo Hospital***

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# Disclosure Statement of Financial Interest

**I, (N.N.Khanna /R.D.Yadave) DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.**



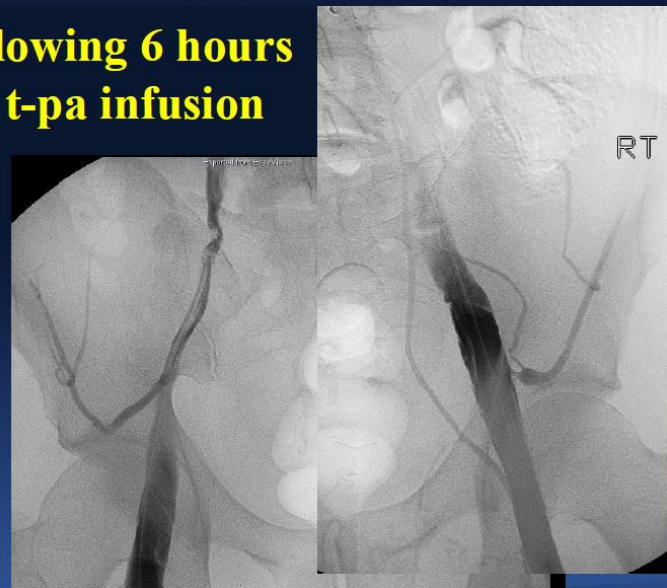


## Bilateral infusion catheters



## Following 6 hours of t-pa infusion

**After Power Pulse Spray**



# Balloon Angioplasty and Self Expanding Stents



# PERSONAL EXPERIENCE

- **976 Venous limbs in 911 patients in last 7 yrs**
- **DVT duration :1-14 days**
- **CDTT alone :286 limbs**
- **Pharmacomechanical Thrombolysis :637 limbs**
- **Mechanical Thrombectomy / aspiration :531 limbs**
- **PTA alone :143 limbs**
- **PTA + Stent :138 limbs**



# Results

- **Complete Resolution** : **638 limbs**
- **Post Thrombotic syndrome** : **43 limbs**
- **Pulmonary Embolism** : **01**
- **Recurrence of DVT** : **37**

# VENOUS INTERVENTIONS

- *Hepatic venous / IVC interventions in Budd-Chiari syndrome*
- *IVC Plasty and stenting in webs/occlusion*
- *IVC filter placement in prevention of Pulmonary thromboembolism*
- *Embolisation/sclerotherapy of venous malformations*
- *Venous thrombolysis - peripheral and cerebral*



# Better Endovascular Outcomes

It is a Different Procedure From What We did in the 1990's

## New Lytics

- Alteplase emerging as preferred agent
- Strong affinity for fibrin
- Nonimmunogenic
- Unlike reteplase and tenecteplase, much shorter T1/2 and can be given as IV infusion

## Safer Procedures

- Bleeding ↓ by 50% in recent CDT reports (4.8%) 2°
  - Better pt. selection
  - Improved techniques
  - Operator experience
- Shorter procedure times, resource utilization and total LOS

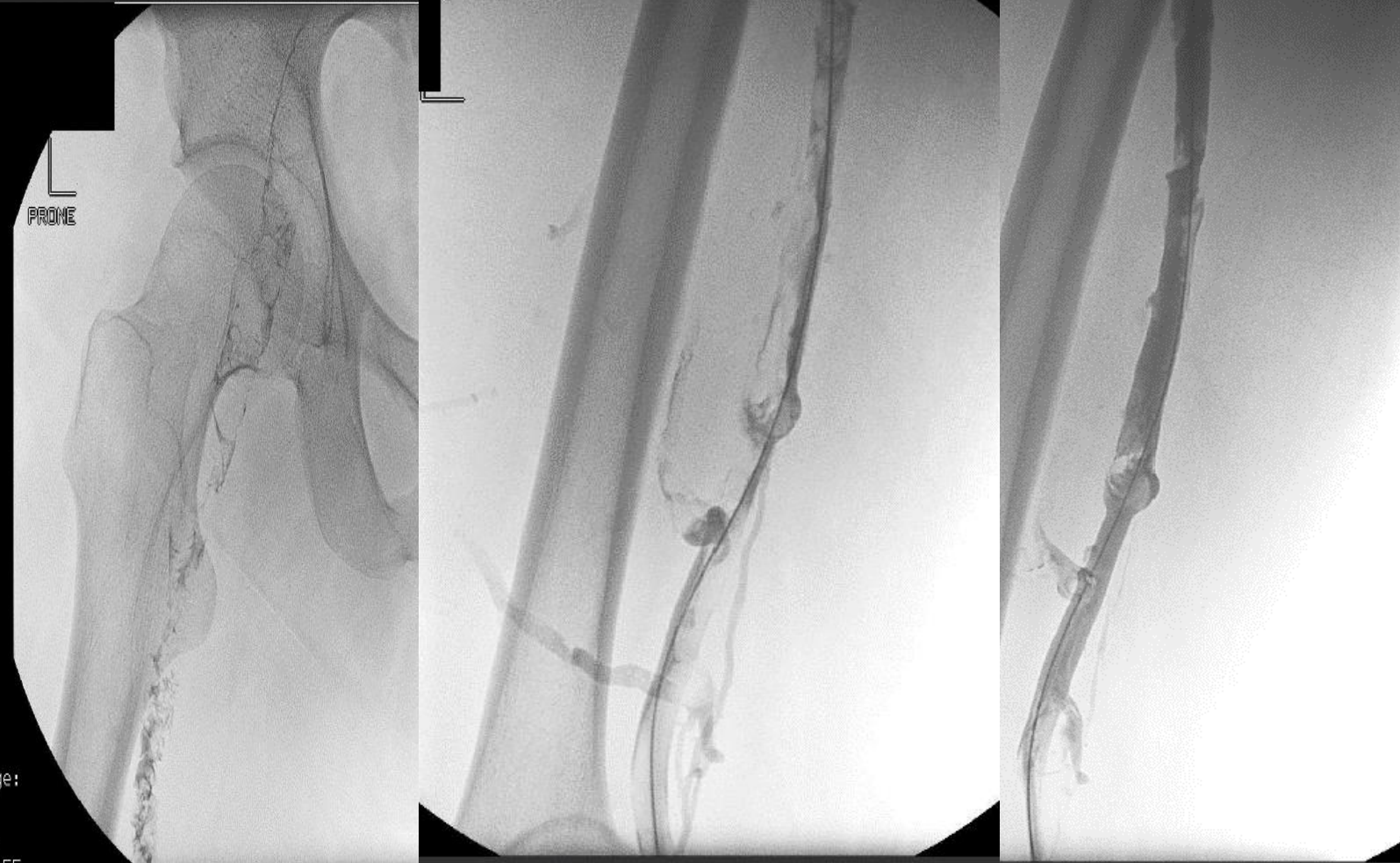
## Anti-coagulation Is Not Enough

- **Does** reduce risk of pulmonary embolism (0.4-1.5% fatal P.E.)
- **Variably** prevents clot propagation
- Does **not** resolve clot
- Does **not** prevent valvular damage
- Does **not** prevent venous hypertension
- Does **not** prevent Post-Thrombotic Syndrome
- Does **not** rapidly resolve symptoms

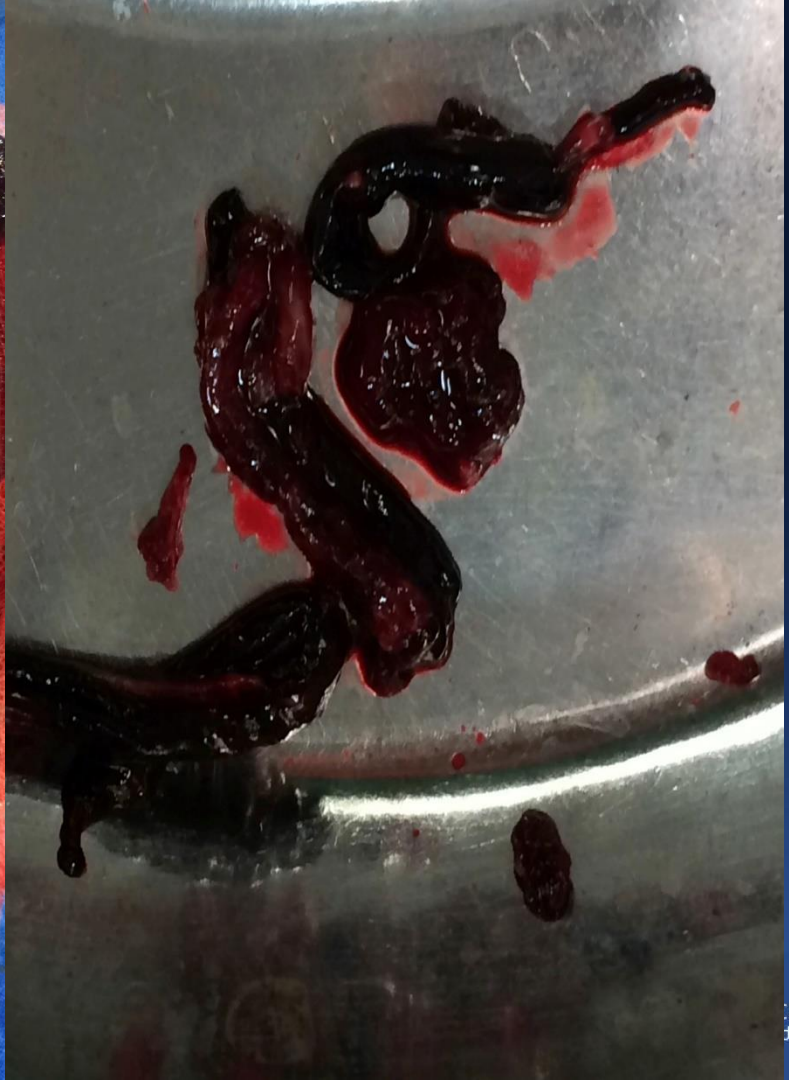
*Anticoagulation therapy has no direct thrombolytic effect, recanalization depends on the effectiveness of the endogenous fibrinolytic system*

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## Pharmacomechanical Thrombolysis or Surgical Venous Thrombectomy

Catheter-directed thrombectomy (CDT) or pharmacomechanical catheter-directed thrombectomy (PCDT) in patients with phlegmasia cerulea dolens

- Must be performed in a center with experience

Consider CDT or PCDT in patients who demonstrate thrombus extension or clinical deterioration despite adequate anticoagulation

CDT/PCDT in patients with low bleeding risk to prevent post-thrombotic syndrome

Do *not* administer systemic thrombolysis or CDT/PCDT to patients with DVT symptoms >21 days

## The new paradigm

**Circulation**

JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Heart  
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Learn and Live...

## Percutaneous Transluminal Venous Angioplasty and Stent

Stent placement in iliac veins is reasonable following successful CDT/PCDT

PTV in isolated lesions of the common femoral vein is reasonable

Stents in stenotic iliac veins in patients with advanced venous insufficiency is reasonable

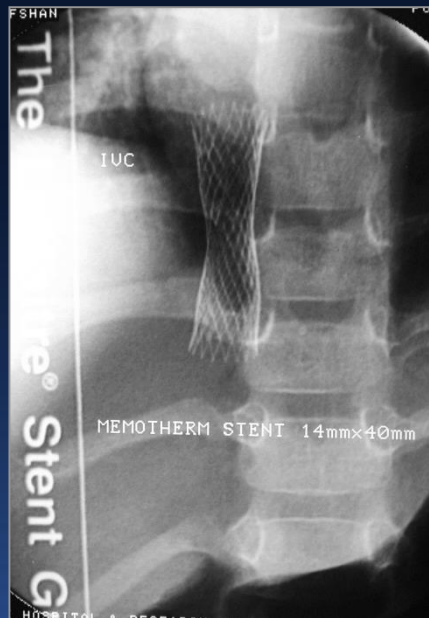
For venous stents, anticoagulation plus antiplatelet therapy is reasonable



## *IVC STENTING*

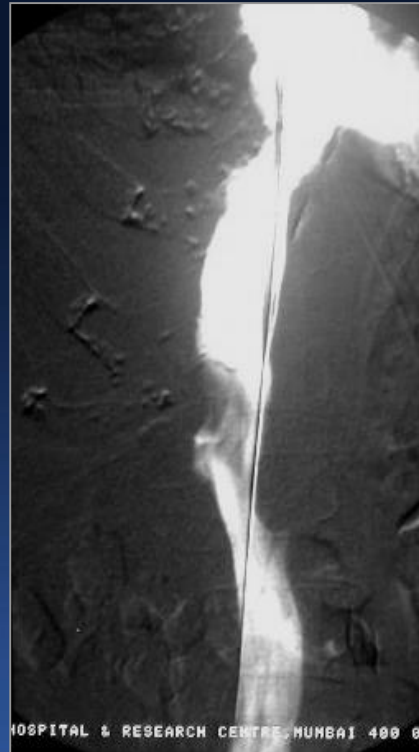


# BUDD CHIARI DUE TO IVC WEB





# IVC FILTER



# SVC SYNDROME

- **MALIGNANCIES OF THE CHEST**
- **POST RADIOTHERAPY**
- **CENTRAL VENOUS CATHETERS or HD Canula.**
- **PACEMAKER LEADS**
- **SYMPTOMS**
  - **FULLNESS OF HEAD**
  - **BREATHLESSNESS**
  - **NEUROLOGICAL SYMPTOMS**
  - **SWELLING OF UPPER EXTREMITIES AND FACE**
  - **FACIAL CYNOSIS**

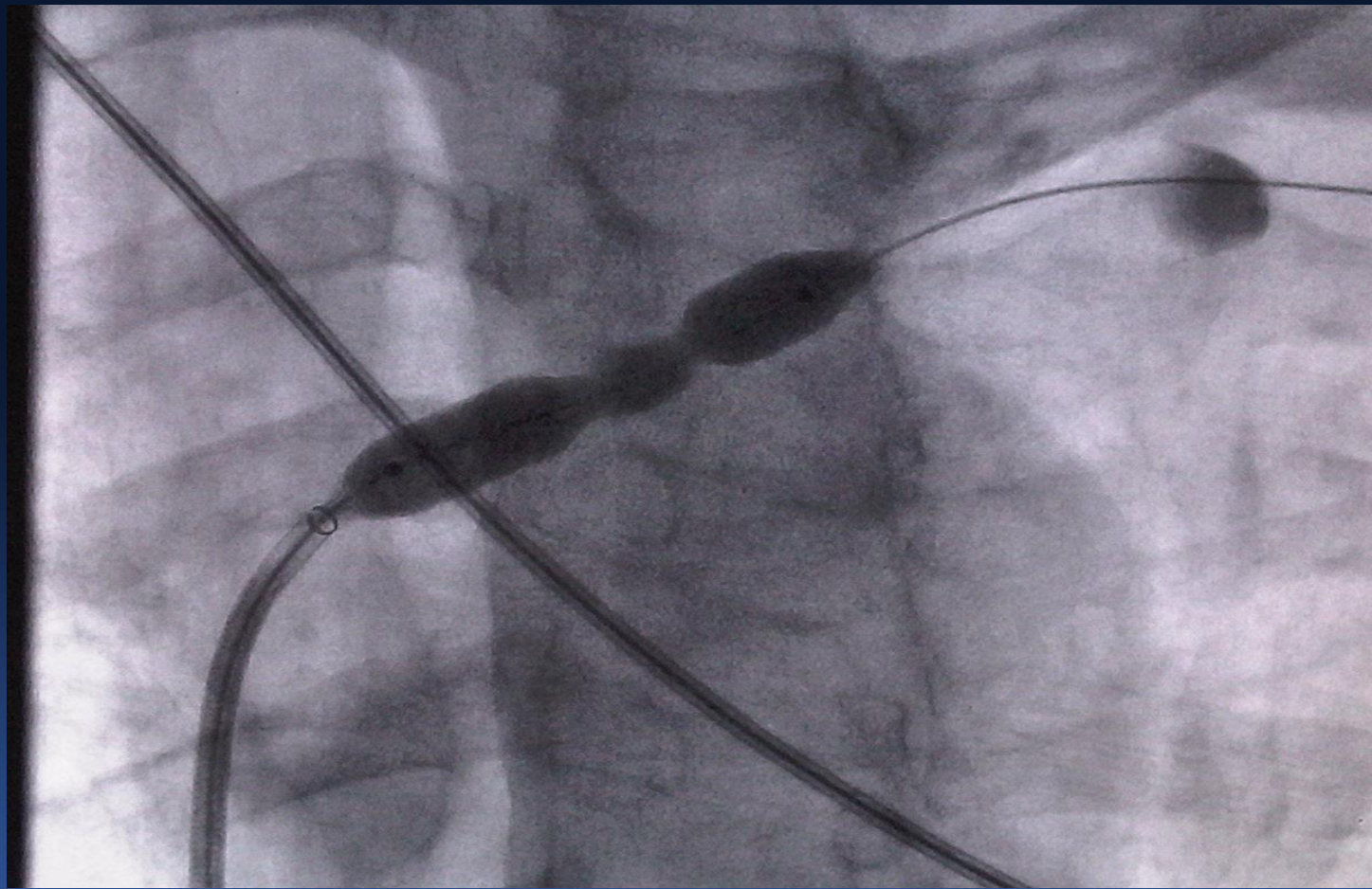


# TECHNIQUES

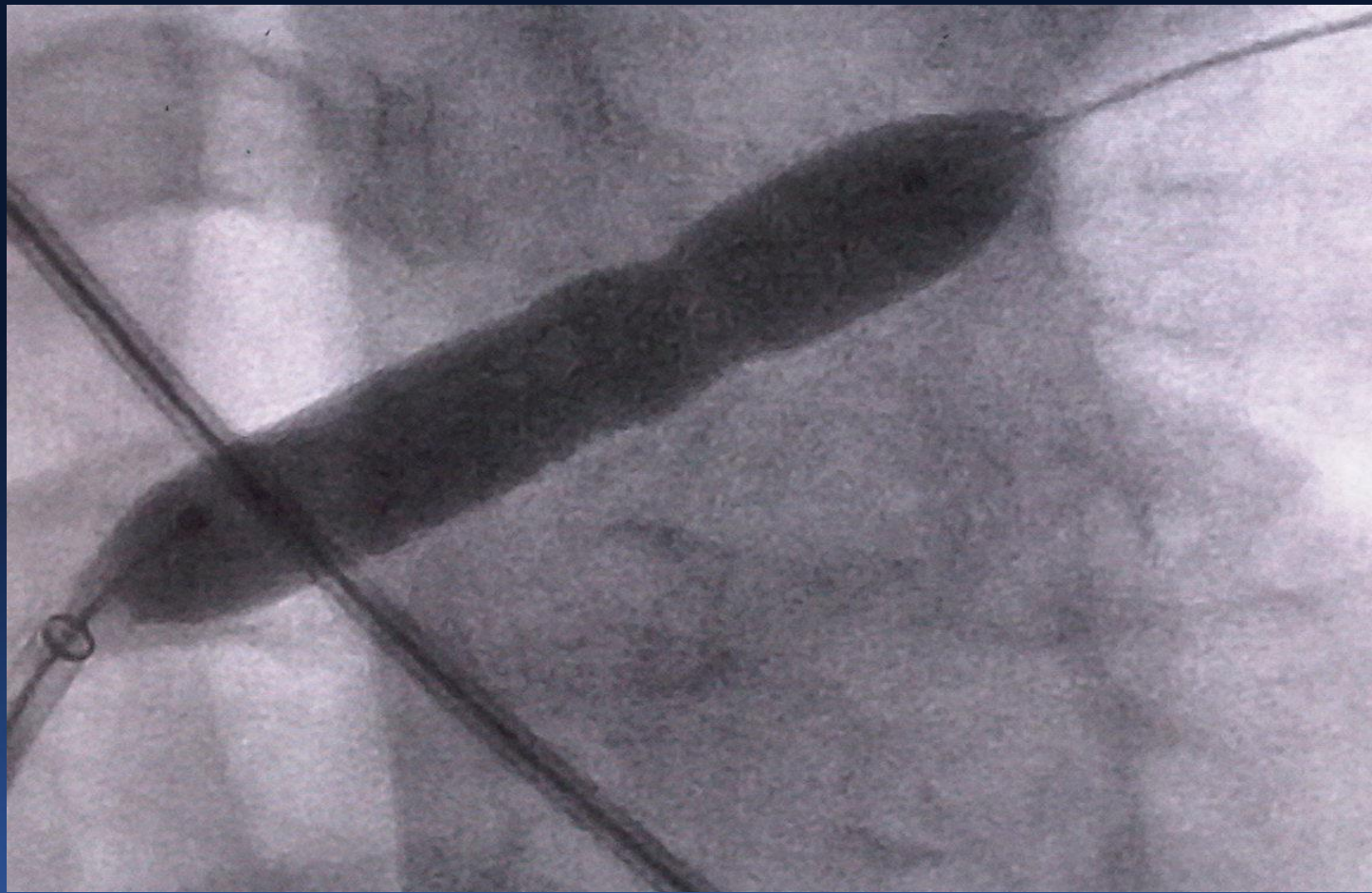
- ANTEGRADE VENOUS APPROACH
- RETEROGRADE VENOUS APPROACH
- CHOICE OF GUIDE CATHETERS (MP or RCA )
- Mostly 8F long shuttle sheath .
- CHOICE OF GUIDE WIRES
  - 0.014 “ CORONARY HYDROPHILIC/CTO WIRES
  - 0.035” HYDROPHILIC WIRES (SOFT END / STIFF END ( sharp recanalisation ) )
  - Transeptal needle (Brokenbrough Puncture needle)
- HIGH PRESSURE NON COMPLIANT BALLOONS(Conquest or Atlas Balloon)



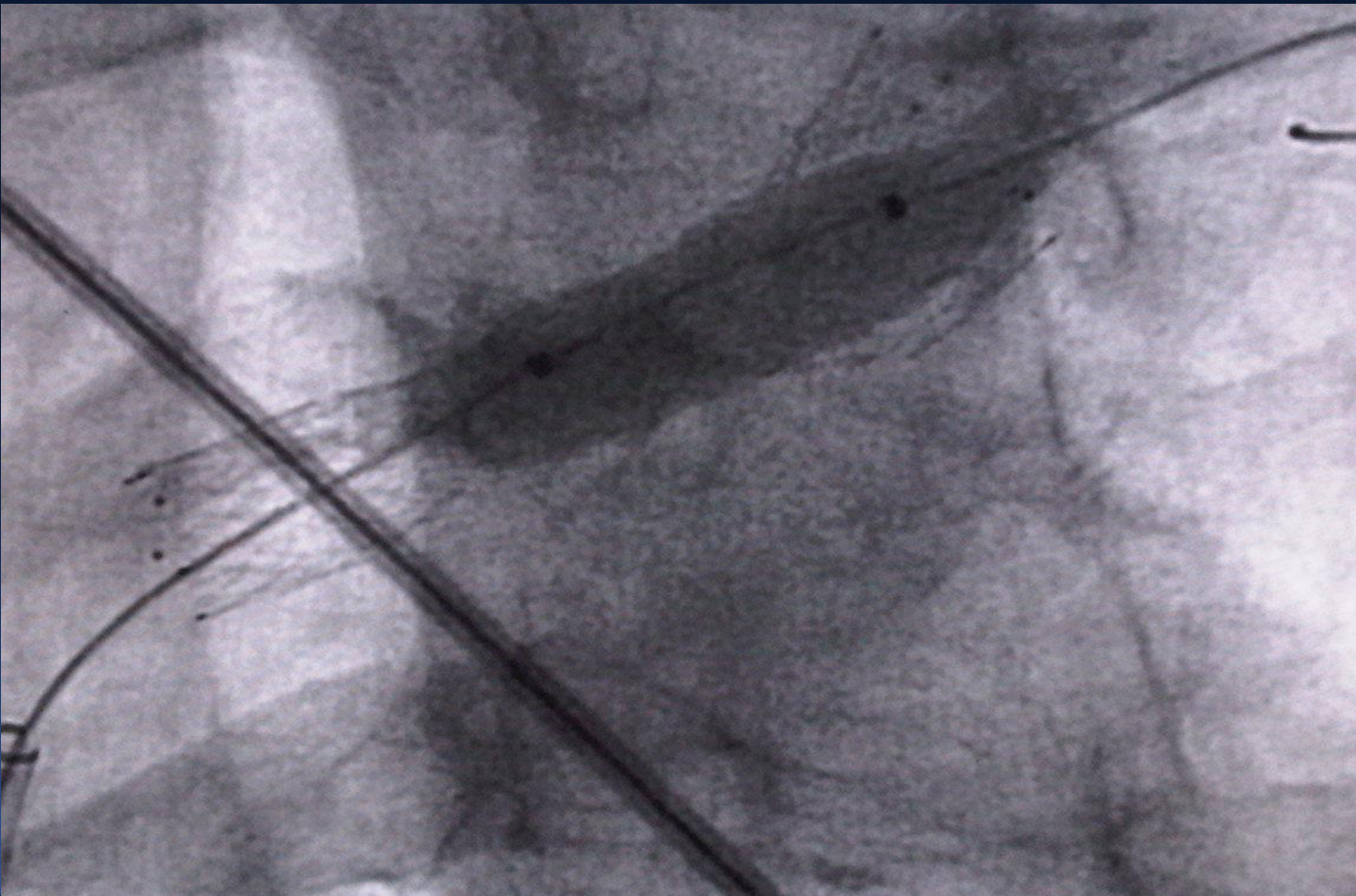


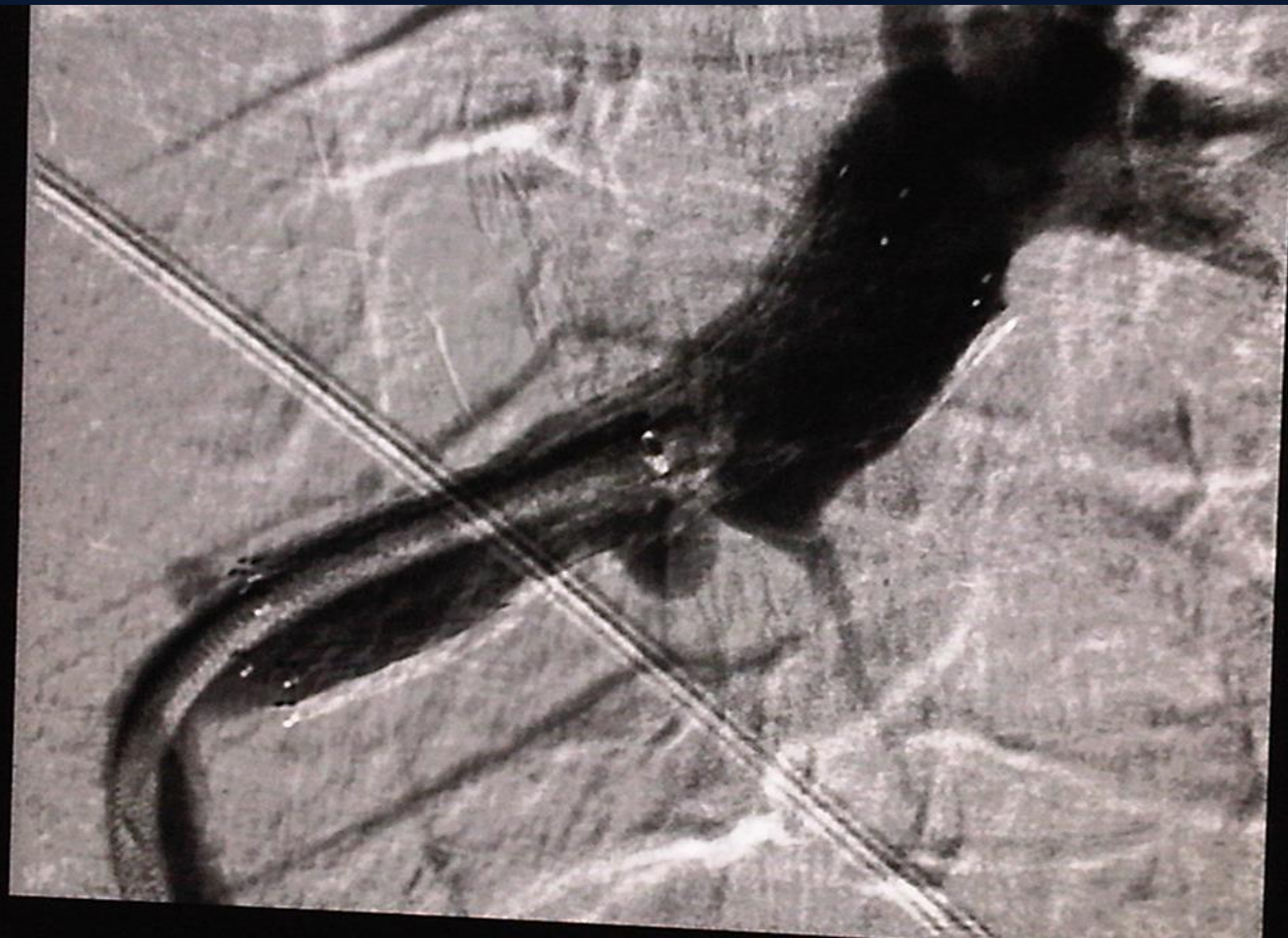
















# PERSONAL EXPERIENCE

• N	:	97
• SCV	:	35
• BCV	:	13
• SVC	:	23
• COMBIN	:	26
• TECH SUCCESS	:	91 /97
• PTA	:	69
• STENTS	:	22
• CDTT	:	23
• PATENCY AT 6 MTHS ( P/S )	:	48%/ 87%





***Thank You***

# SVC Stenting

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