Large Caliber Percutaneous Vacuum Assisted Thrombectomy In ALI:

- How Does It Work
- Benefits And Limitations
- Will It Replace Thrombolysis And Open Surgery?

**DISCLOSURES**

- Research grant: B Braun
- Invited speaker: Covidien (Medtronic)

**Penumbra Indigo Device description**

- Available in the market beginning of 2014
- Near pure vacuum aspiration
  - pressure of -29 inchHg/98.2 kPa with no time limits
- Various catheter lengths and sizes
- Tip angulation for circumferential aspiration
- Multiple material transitions
- Advanced tracking technology

**Percutaneous treatment of ALI Guidelines**

Indications to mechanical thrombectomy (regardless the device)

- more severe cases – neurological deficit
- contraindication to lytic therapy – reduce dose
- adjunctive procedure – distal embolic complication

Why VAT in ALI?

- Proven track record of success in ischemic stroke therapy
- Current management are still associated with incomplete revascularization, bleeding complications, long procedural time and significant morbidity
- Where do we stand?

Penumbra/Indigo System provides a novel aspiration thrombectomy tool in treatment of peripheral and visceral arterial occlusions – final results of the PIVOTAL trial

- James T. Bernardin, MD, FAIR, Richard R. Savitz, MD, George A. Adams, MD

Results – TIMI Scores Pre and Post Thrombectomy

Successfully achieved revascularization 96.5% (88.3% Indigo alone)

No device related serious adverse events
Immediate extraction of the debris is considered the ideal solution.

- Fast effective approach to treat intraprocedural distal embolization
- Avoid potential dramatic clinical consequences.

The primary endpoint was obtained in 17 of 20 (85.0%) BTK lesions and in seven of 13 (53.9%) ATK lesions.

- TIMI scores after VAT significantly higher for BTK lesions
- ATK lesions required concomitant endovascular therapy

Why VAT does better in BTK than in ATK

- Large mismatch between the vessel and the catheter size
- BTK thrombus is softer (acute iatrogenic event)
- BTK thrombus is short - less thrombotic workload
**Conclusions**

This technology is a promising option for treating ALI safely and quickly. Very effective for intraprocedural embolic events.

The main theoretical advantages are immediate reestablishment of blood flow without thrombolysis.

It may potentially increase the safety profile for treating ALI and reduce the cost of local thrombolysis.

➢ **Will It Replace Thrombolysis And Open Surgery ?**

  - **ATK**: NO (?)  
  - **BTK**: YES  

  RCT Surgery vs VAT are desirable

  It may likely become the first line option

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**suite Room 4303, Hilton hotel New York VEITH meeting,**

**Re-Open Registry launch**

Fri, Nov 17, 2017 8:00 AM - 8:30 AM EST