

# Long-term functional outcomes and subclavian vein patency in patients undergoing thoracic outlet surgery for **Paget-Schroetter syndrome**

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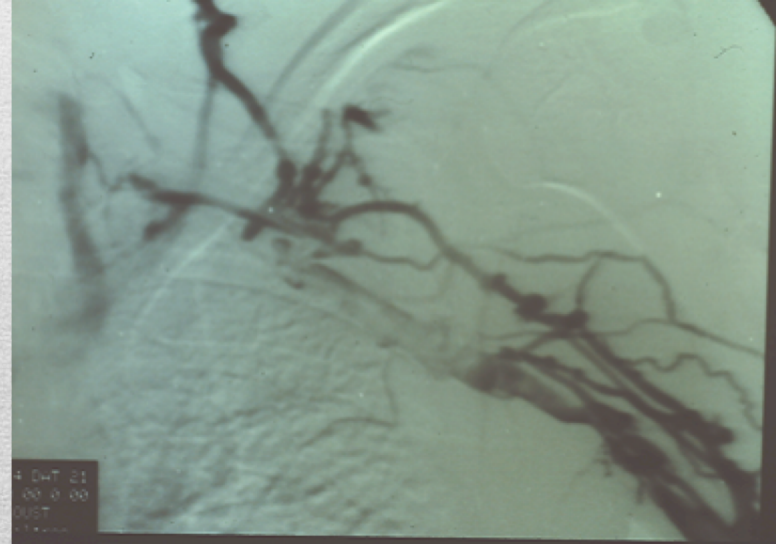
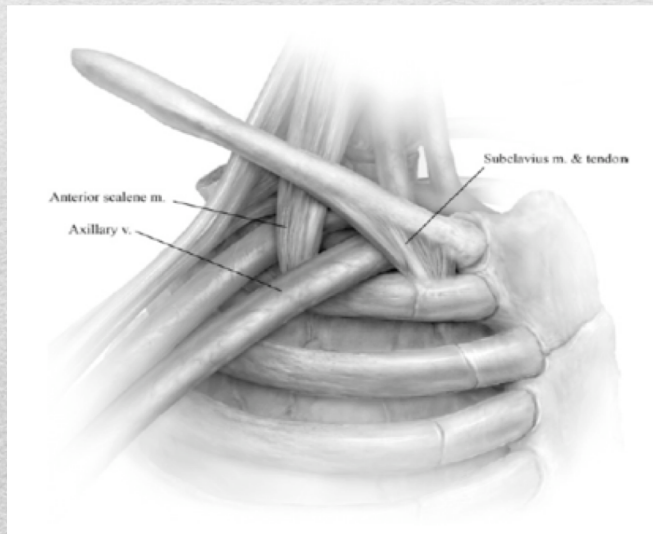


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# BACKGROUND

## □ Paget-Schroetter syndrome (PSS)

- Chronic compression of the SCV in the costoclavicular space
- Deep upper extremity venous thrombosis
- Disability in young, active people
  - ❖ school age
  - ❖ prime of working life





# AIM

- ❑ **To assess subclavian vein (SCV) patency and long-term functional outcomes following surgical decompression of the thoracic outlet (SDTO) for Paget-Schroetter syndrome (PSS).**
  
  - ❑ **SDTO procedure :**
    - **1st rib excision,**
    - **anterior scalenectomy,**
    - **resection of the costoclavicular ligament,**
    - **external venolysis**
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# METHODS

**452 SDTO for Thoracic Outlet Syndrome  
Jan. 1978 – Jan. 2013**

**Venous TOS**  
positional compression  
without thrombosis  
(42)

**Arterial and Neurologic TOS  
(377)**

**Paget-Schroetter syndrome  
33 (7.3%)**

**Clinical success =** absence of recurrent thrombosis or functional symptoms  
+ ability to maintain normal professional activities



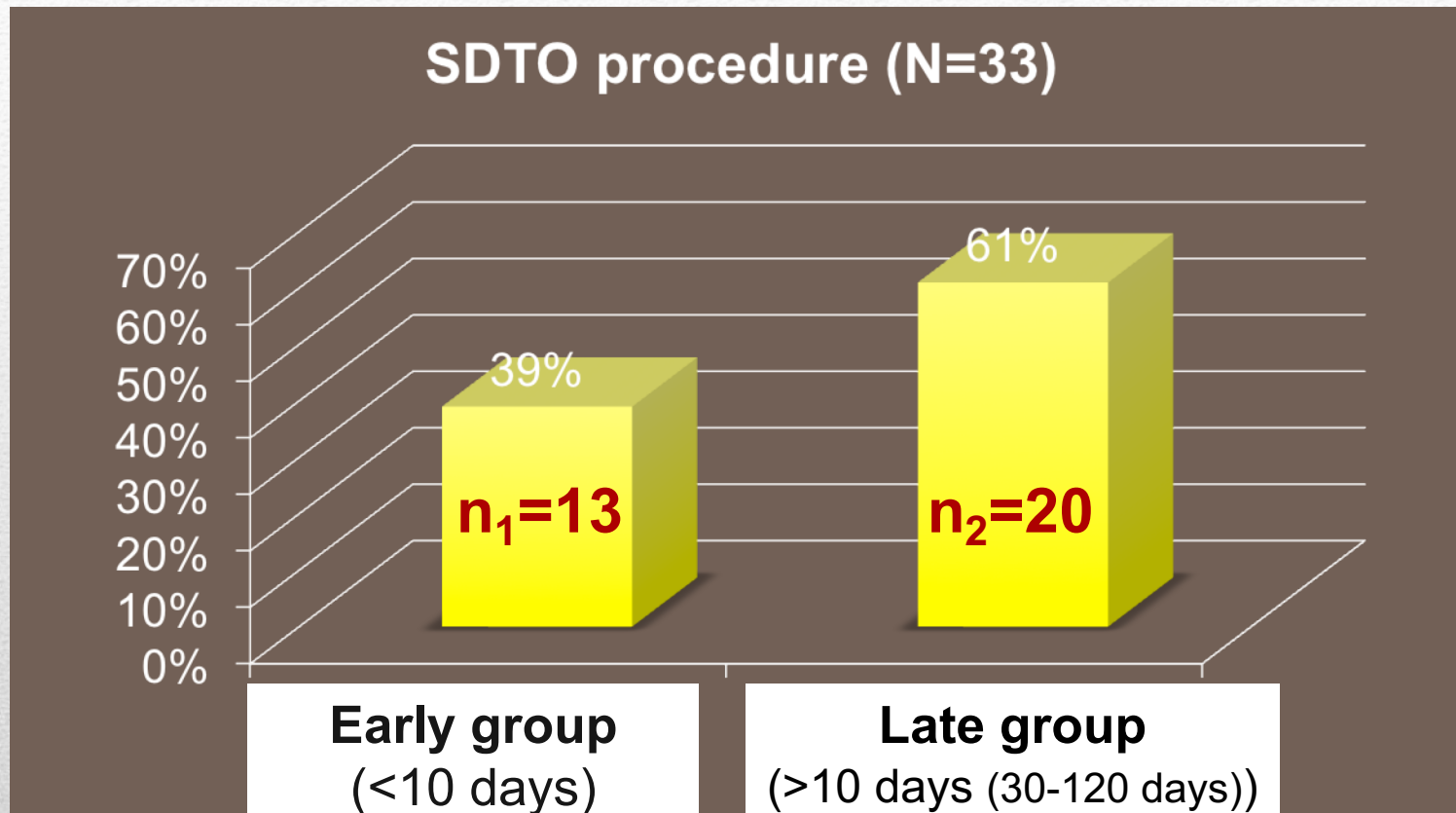
# RESULTS

**N=33**

<b>Gender</b>	<b>17 men / 16 women</b>
<b>Mean age</b>	<b>34 yrs (14-53)</b>
<b>Vigorous exercise history</b>	<b>39% (13/33)</b>
<b>Diagnosis by venography</b>	<b>88% (29/33)</b>
<b>Diagnosis by duplex scan only</b>	<b>12% (4/33)</b>
<b>Transaxillary STDO</b>	<b>76% (25/33)</b>
<b>Combined infra-supraclav. STDO</b>	<b>24% (8/33)</b>

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# RESULTS – *time to surgery*



## Active SCV repermeation before SDTO

- thrombolysis (3)
- thrombectomy (9)
- endovenectomy followed by patch venoplasty (1)

*All received anticoagulant before SDTO*

## SCV repermeation before SDTO (15)

Chronic SCV thrombosis (5)

*All received anticoagulant before SDTO*



# RESULTS - *complications*

<b>Early complications</b>	<b>N (%)</b>	<b>Management</b>
<b>Postoperative pneumothorax</b>	<b>2 (6%)</b>	<b>Tube thoracostomy</b>
<b>Thoracic duct lymph leak</b>	<b>3 (9%)</b>	<b>Prolonged drainage</b>
<b>Neurologic morbidity</b>	<b>0 (0%)</b>	<b>-</b>
<b>Minor hematomas</b>	<b>4 (12%)</b>	<b>Conservative</b>

- ❖ **All had favourable outcomes**
- ❖ **No postoperative death**
- ❖ **No major bleeding complications**

# RESULTS - *patency*

□ The median follow-up was 240 months (range: 1-316 months)

□ Early group : 75% at 5 years

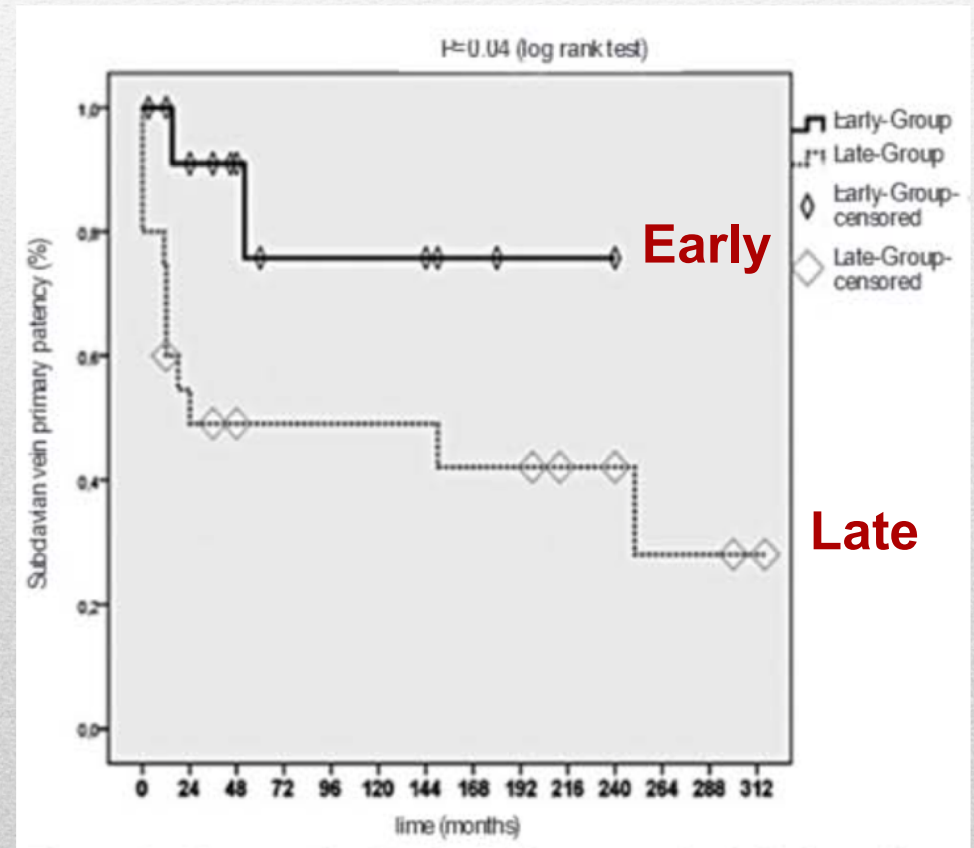
❖ 2 reocclusions

□ Late group : 49% at 2 years

❖ 3 reocclusions

❖ 4 residual stenoses

❖ 5 chronic occlusions

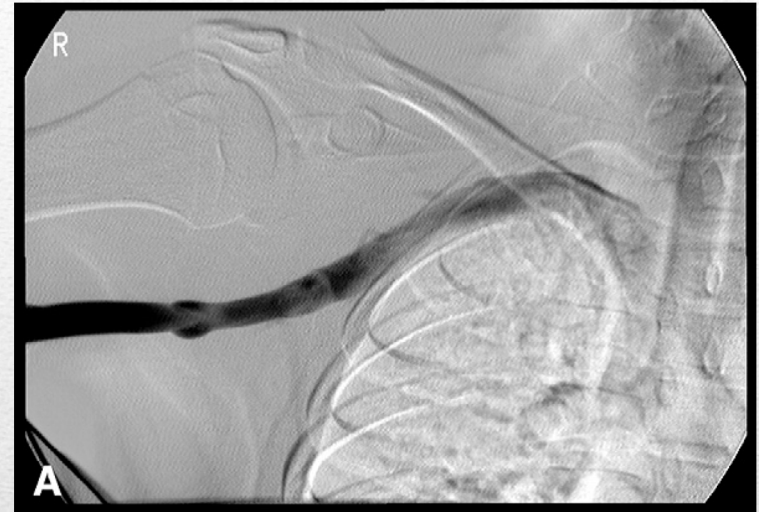




# RESULTS – *contralateral TOS*

□ **Contralateral SCV intermittent compression syndrome : 7 patients**

→ **SDTO within 7-months (range: 3-24 months) after the index event**





# RESULTS – *functional outcome*

□ Long-term clinical success : 85% (28/33)

Sub-group analysis	Clinical success, % (N)	P value
Male vs female	83% (14/17) vs 87.5% (14/16)	0.9
Early vs late group	100% (13/13) vs 75% (15/20)	0.04
Transaxillary vs infra-supraclav. Approach	22/25 (88%) vs 6/8 (75%)	0.4



# CONCLUSION

- ❑ **Paget-Schroetter Syndrome is a rare phenomenon**
- ❑ **Patients should receive treatment in the acute phase**
  - **Thrombolysis or Surgical thrombectomy**
  - **Followed by SDTO**
- ❑ **Early treatment allows better patency, better functional outcome**
- ❑ **Late treatment leads to chronic symptoms and disability**

*The Journal of Cardiovascular Surgery 2017;58:451-7*

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