

**TREATMENT AND PITFALLS:
LATERAL MARGINAL VEIN**

Peter Gloviczki, MD, PhD, FACS
Roberts Emeritus Professor of Surgery,
Chair, Emeritus, Division of Vascular and
Endovascular Surgery,
Mayo Clinic,
Rochester, MN.

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NO CONFLICT OF INTEREST

VASCULAR MALFORMATIONS
Advances and Controversies in Contemporary Management

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Byung-Sooon Lee
Peter Gloviczki
Francisco Bhai

LATERAL MARGINAL VEIN

- Truncular venous malformation
- Persistent embryonic vein (The Vein of Servelle)
- Frequently associated with hypoplasia or, rarely, aplasia of the deep venous system
- Frequently part of complex vascular malformations (Klippel-Trenaunay or Servelle- Martorell Syndrome)s

LATERAL MARGINAL VEIN

Klippel and Trenaunay's Syndrome
191 Operative Cases
MARTORELL, M.D.

1. Servelle M. La Veinographie va t'elle nous permettre de demembrer le syndrome de Klippel et Trenaunay. Presse Medicale 1945; 26:30. 353-354.
2. Servelle M. Les malformations congenitales des veines. Revue de Chir 1949; 88:106.

LATERAL MARGINAL VEIN

Congenital vascular malformations: The persistence of marginal and embryonal veins

Summary
The persistence of marginal and embryonal veins is a congenital vascular malformation. It is characterized by the presence of a lateral marginal vein (LMV) and a persistent embryonic vein (PEV). The LMV is a vein that is normally present in the lower extremities but is often absent or hypoplastic. The PEV is a vein that is normally present in the lower extremities but is often absent or hypoplastic. The persistence of these veins is associated with a variety of other vascular malformations, including Klippel-Trenaunay syndrome and Servelle-Martorell syndrome.

Classification
The persistence of marginal and embryonal veins is classified into five types (Typ I to Typ V) based on the location and extent of the malformation.

Typ	Prevalence
Typ I	12,5%
Typ IIa	37,5%
Typ IIb	25%
Typ III	12,5%
Typ IV	12,5%

KLIPPEL-TRENAUNAY SYNDROME

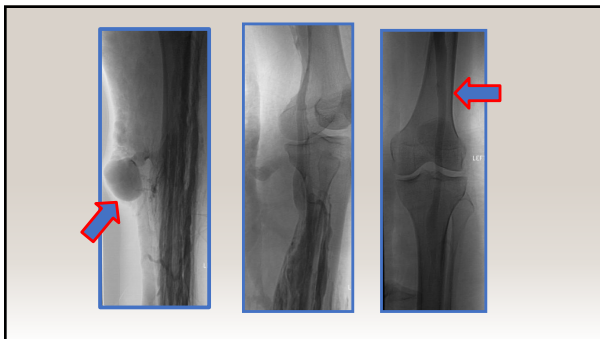
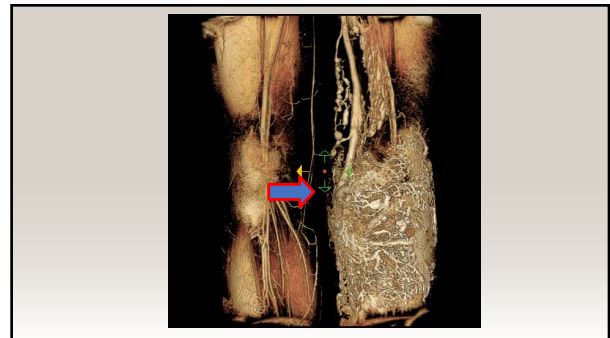
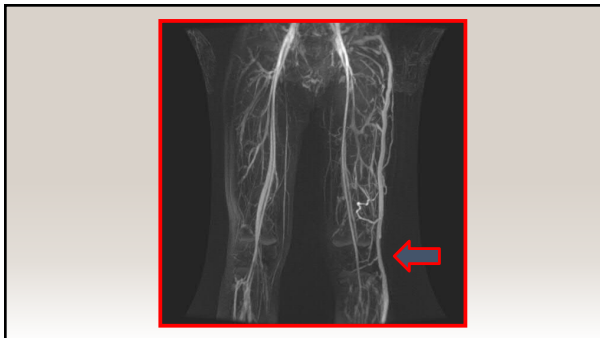
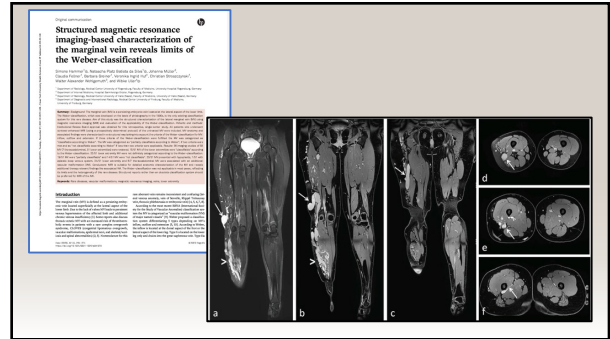
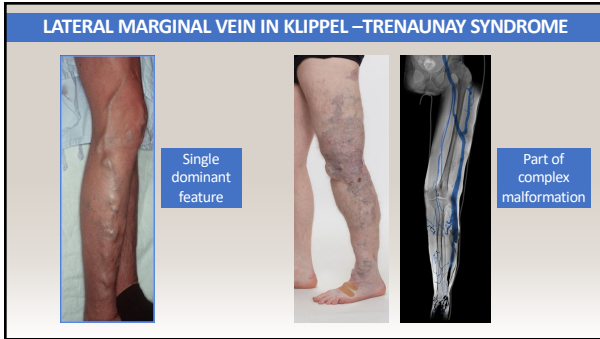
PIK3CA gene mutation

↓

PIK3 abnormal activity

↓

Increased cell proliferation, that leads to abnormal growth of bones, soft tissues, and blood vessels



Klippel-Trenaunay Syndrome

Mayo Clinic 1987 to 2007
Total: 684 Patients
Venous surgery: 49 patients
7%

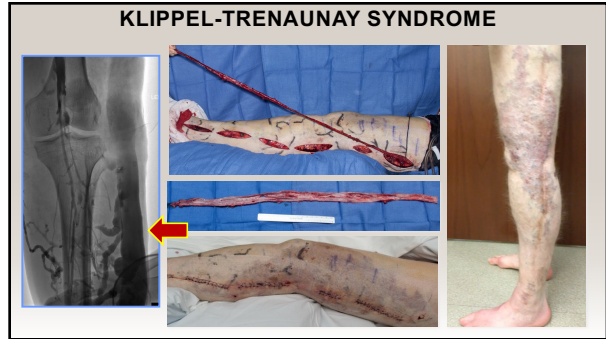
Phlebology

Surgical treatment of varicose veins and venous malformations in Klippel-Trenaunay syndrome

Abstract

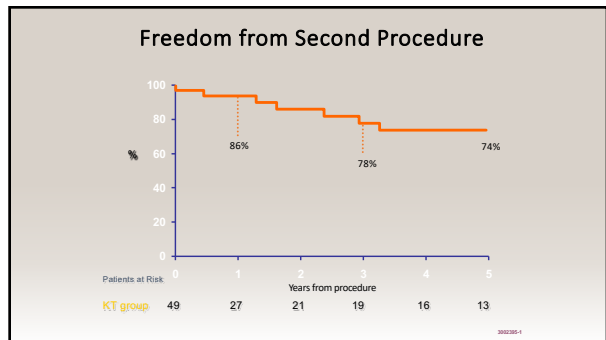
Background: Klippel-Trenaunay syndrome (KTS) is a rare congenital malformation characterized by venous malformations and limb overgrowth of the face and hand. The presence of the limb overgrowth is the defining feature of KTS, which is present in 80% of patients. The presence of the limb overgrowth is the defining feature of KTS, which is present in 80% of patients. The presence of the limb overgrowth is the defining feature of KTS, which is present in 80% of patients.

Keywords: Venous malformations, Klippel-Trenaunay syndrome, venous surgery



Early Outcomes

Complications	n	%
Hematoma	3	6
Deep Vein Thrombosis	1	2
Pulmonary embolism	1	2
Nerve Injury (peroneal n. palsy)	1	2



PS188.
Open Surgical vs Endovenous Ablation Treatment of Patients with Klippel-Trenaunay Syndrome
 Jennifer Fahmi, Peter Gliwowski, Manjiv Kalra, Mark D. Fleming, Audra A. Duncan, Gustavo S. Odench, Haraldur Bjarnason, David D. D'Amico, Rochester, Minn

Objectives: To assess safety and efficacy of endovenous ablation treatment (EAT) vs endovenous ligation (EVL) in patients with Klippel-Trenaunay Syndrome (KTS).

Methods: Clinical data of a mixed venous malformation treated with EAT or EVL from 2008 to 2013 were reviewed. All patients had varicose veins, 50% had limb overgrowth, and 63% had capillary malformations. Three had previous

Radiofrequency ablation in carefully selected patients with KTS is safe and results are similar to those treated with surgical excision

J Vasc Surg, 2014;59:78-79S

EVIDENCE SUMMARY

Evaluation and management of the lateral marginal vein in Klippel-Trenaunay and other phlebo-osteocapillary syndromes

1. Percutaneous access and cannulation of the LMV
2. Venography
3. Anchoring coil embolization of the perforators through super-selective microcatheterization
4. Foam sclerotherapy with 3% STS (1:1 mixture with air)

**TOP 10 TIPS
FOR INTERVENTIONS FOR LATERAL MARGINAL VEINS**

10. Study anatomy and venous function (Duplex scan, MRV, plethysmography, venogram)
9. Be sure there is adequate deep venous drainage
8. Consider removable IVC filter
7. Respect significant deep compartment involvement
6. Use DVT prophylaxis

**TOP 10 TIPS
FOR INTERVENTIONS FOR LATERAL MARGINAL VEINS**

5. Use endovenous techniques selectively, prevent coil dislodgement by anchoring and minimize foam getting into the deep system
4. For open surgery, use leg tourniquet
3. Use high ligation of the LMV and ligation + division of perforators before surgical or endovenous ablation
2. Use small incisions to excise and ligate venous tributaries or superficial aneurysms

**TOP 10 TIPS
FOR INTERVENTIONS FOR LATERAL MARGINAL VEINS**

1. Stay conservative and always consider compression therapy first!

THANK YOU !



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