

Superficial vein thrombophlebitis and compression

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CIRC meeting Bologna
October 2019

SVT and compression

- **Declaration of conflicting interests**
 - No potential conflict
 - Flight ticket and hotel room paid for by CIRC - the Center of Interdisciplinary Research on Compression

SVT in varicose vein



S. Scott Tapper

SVT in non varicose vein



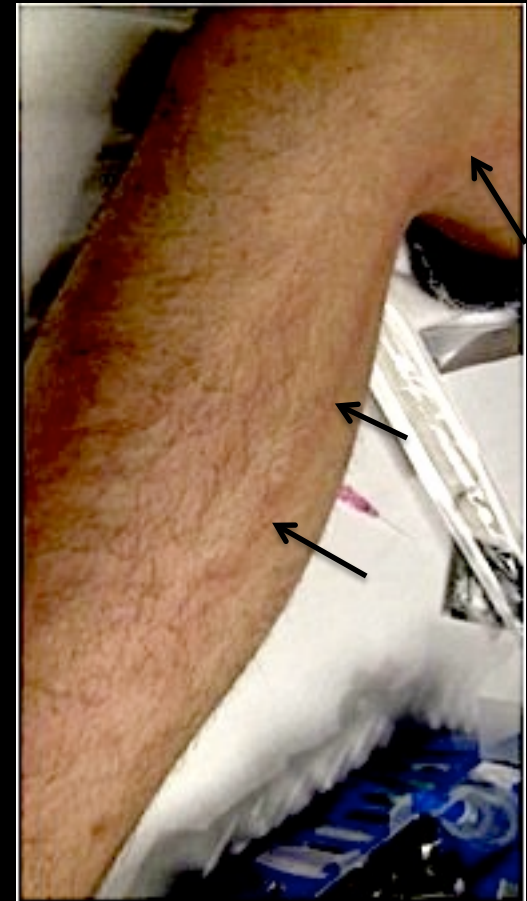
diseaseseshow.com/wp-content/uploads/2017/04/phlebitis.jpg

SVT and symptoms and clinical signs

- Pain,
- Tenderness over a superficial vein
- Warmth, redness,
- A "cord-like" structure upon palpation.
- Legs and also any superficial vein (e.g arms)

SVT and differential dermatological diagnosis

- Erysipelas
- Cellulitis
- Lymphangitis
- Lyme disease
- *Chronic dermatitis*
- *Erythema nodosum*
- *Cutaneous manifestations of immunologic or rheumatologic disorders*



SVT and duplex

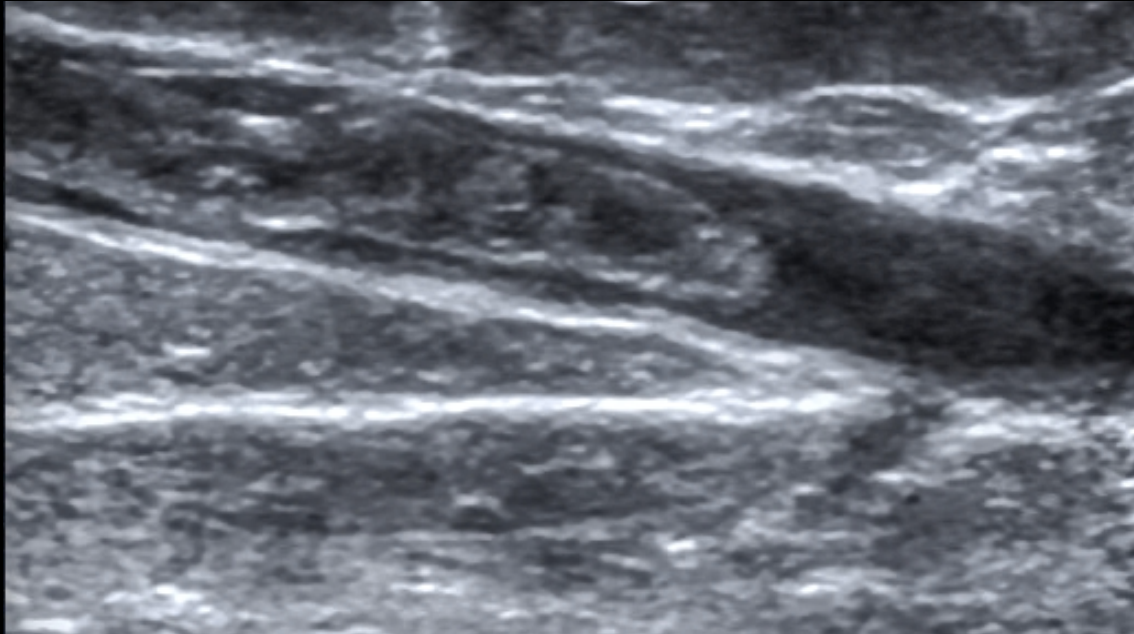


Duplex ultrasound **mandatory**⁽¹⁾ +++

- Thrombus extension, deep venous thrombosis,
- Follow up in case of DVT
- SVT in non varicose vein

1) Kalodiki, E; Stvrtinova, V; Allegra, C; Andreozzi et al
Superficial vein thrombosis: a consensus statement.
International Angiology. 2012, 31 (3): 203–216.

SVT and duplex



Great saphenous vein thrombosis (Nevit Dilmen)

- A thrombus greater than 5 cm in length require anticoagulants
- SVT of the LSV or the SSV within 3 cm of the SFJ or SPJ must be considered to be equivalent to a DVT +++

SVT and complications

- Association SVT and DVT in 6-44%, and PE in 1,5-33%⁽¹⁻²⁾.
- Venous thromboembolic complications on every fourth patient ⁽¹⁾
- In a French population, association SVT and DVT in 24,6%, and PE in 4,7% ⁽³⁾

1) Sandor T. Superficial vein thrombosis A state of art. [Orv Hetil.](#) 2017 Jan;158(4):129-138.

2) Kalodiki, E; Stvrtnova, V; Allegra, C; Andreozzi et al Superficial vein thrombosis: a consensus statement. International Angiology. 2012, 31 (3): 203–216.

3) Cosmi, B. (July 2015). "Management of superficial vein thrombosis". Journal of Thrombosis and Haemostasis. 13 (7): 1175–1183.

SVT and complications

- When SVTs recur after they resolve :
"migratory thrombophlebitis. »^[1] .
- Cancer (e.g.Trousseau syndrome) and other
thrombophilia.^[1]

1) Superficial Venous Thrombosis – Heart and Blood Vessel Disorders – Merck Manuals Consumer Version".
Merck Manuals Consumer Version. Merck Sharp & Dohme Corp. Retrieved 7 February 2018.

SVT and risk factors

- Varicose veins
- Other main risk factors:
 - Immobilization, laparoscopy, age, endovenous procedures
 - Cancer, obesity, history of thromboembolism
 - Pregnancy, pill (estrogen)
 - Thrombophilia (Factor V, prothrombin mutation, protein C and S, antithrombin, factor XII deficiency)
 - Behcet's and Buerger's diseases
- Traumatism, infection...: intravenous catheters

SVT and treatment

- To treat or not to treat a SVT ? ⁽¹⁾
 - For a long time, SVT has been considered as a benign disease...
 - Anticoagulants or not
 - Adjuvant treatments
 - NSAIDs
 - Compression: stockings or bandages

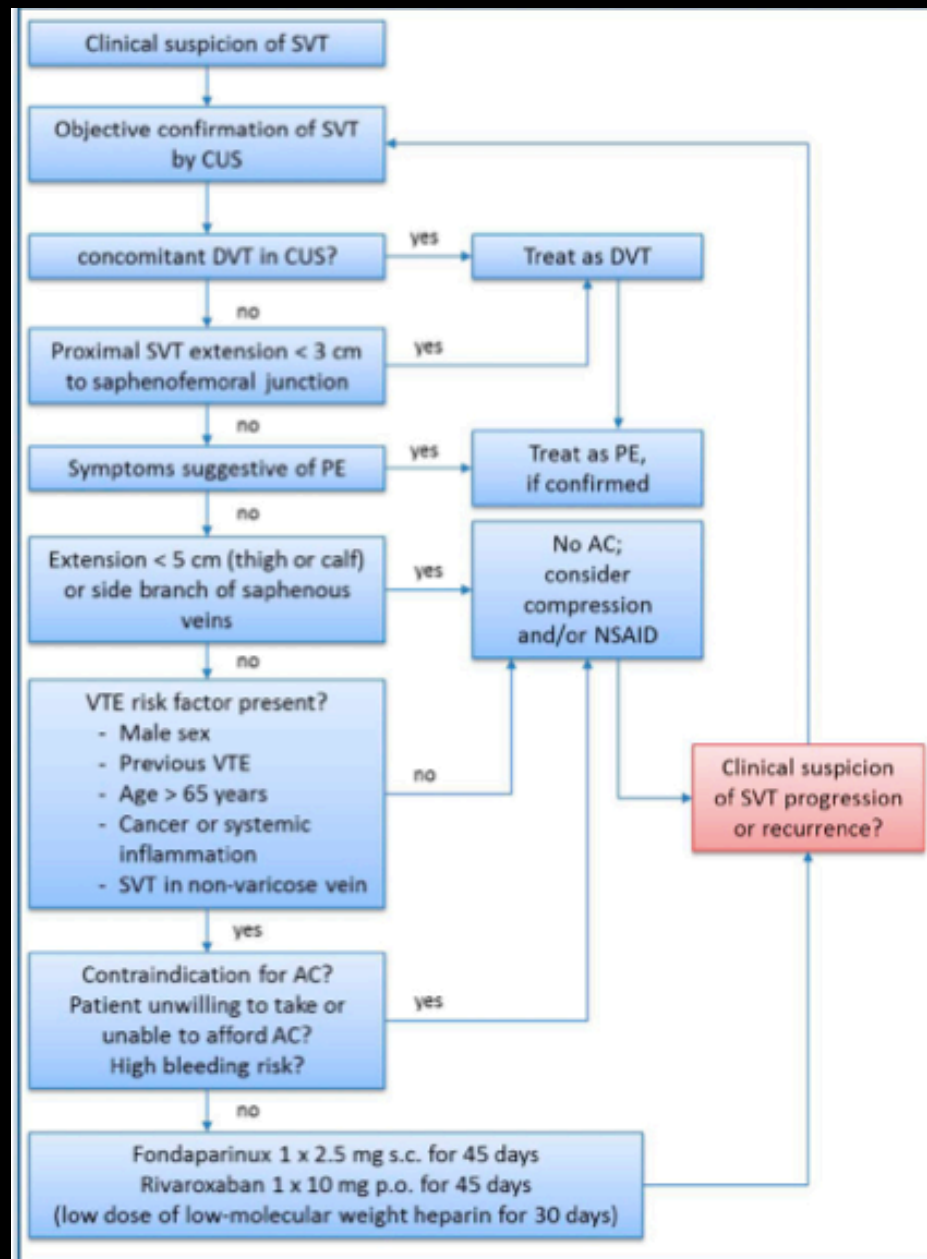
[1\) Beyer-Westendorf J](#)

[Controversies in venous thromboembolism: to treat or not to treat superficial vein thrombosis.](#)

[Hematology Am Soc Hematol Educ Program. 2017 Dec 8;2017\(1\):223-230.](#)

Treatment decision algorithm for patients with SVT (1)

- . Fondaparinux
- . Rivaroxaban
- . LMWH
- . Oral anticoagulants
- . Compression
- . NSAID



1) Beyer-Westendorf J
Controversies in venous thromboembolism:
to treat or not to treat
superficial vein thrombosis.
Hematology Am Soc Hematol Educ Program. Dec
8;2017(1):223-230.

SVT and compression

- Fixed compression, used as the only treatment, has been shown to improve duplex findings in **81% of patients**⁽¹⁾
- **Both bandages and graduated elastic compression stockings** can be used. In extensive cases, both types of compression may be applied.

1) Mayer W, Partsch H.
Superficial thrombophlebitis: a harmless disorder?
Scope Phlebol Lymphol. 1999;2:36-38.

SVT and compression

- Compression is helpful in relieving symptoms and may contribute to healing of the thrombotic process⁽¹⁾

2) Nicolaides AN, Allegra C, Bergan J, et al. Management of chronic venous disorders of the lower limbs: guidelines according to scientific evidence. Int Angiol. 2008;27:1-59.

SVT and treatment

The goal of treatment ⁽¹⁾ of V-SVT or NV-SVT is the same in the acute stage of the disease :

- to reduce local inflammation
- and prevent the SVT from extending from its point of origin.

1) Kalodiki, E; Stvrtinova, V; Allegra, C; Andreozzi et al
Superficial vein thrombosis: a consensus statement.
International Angiology. 2012, 31 (3): 203–216.

SVT and compression

- A Cochrane review of RCTs for SVT included several RCTs has reported **beneficial effects** of different anticoagulation regimens with **compression stockings**.
- No data in this review AC vs AC + CS

Di Nisio M, Wickers IM, Middeldorp S. Treatment for superficial thrombophlebitis of the leg. Cochrane Database Syst Rev. **2013**;(4): CD004982.

SVT and compression

- A single-center RCT for 3 weeks.
- 80 patients with isolated SVT
CS (23-32 mmHg) + LMWH +/- NSAIDs **vs**
no CS + LMWH +/- NSAIDs .
- . Primary outcome : Reduction of pain (VAS)
- Secondary outcomes: consumption of analgesics,
thrombus length,

1) Boehler K, Kittler H, Stolkovich S, Tzaneva S.
Therapeutic effect of compression stockings versus no compression
on isolated superficial vein thrombosis of the legs: a randomized clinical trial.
Eur J Vasc Endovasc Surg. 2014 Oct; 48(4):465-71

SVT and compression

- No significant difference between the 2 groups
- At day 7, patients with CS revealed a significantly faster thrombus regression ($p = 0.02$)

1) Boehler K, Kittler H, Stolkovich S, Tzaneva S.
Therapeutic effect of compression stockings versus no compression
on isolated superficial vein thrombosis of the legs: a randomized clinical trial.
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SVT and compression

- In patients with SVT who are treated with LMWH + CS vs LMWH alone, aside from a **reduction of thrombus growth** after 1 week
- An additional benefit for symptomatic outcomes has not been demonstrated
- **Grade 1C**

Eberhard Rabe, Hugo Partsch, Juerg Hafner, Christopher Lattimer et al
Indications for medical compression stockings in venous and lymphatic disorders:
An evidence-based consensus statement
Phebiology, **2018**, Vol. 33(3) 163–184

SVT and compression

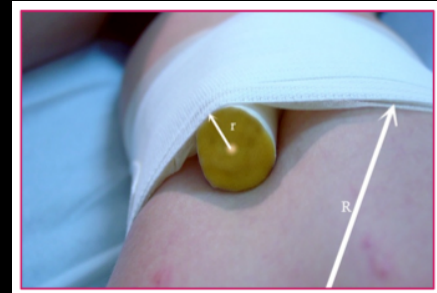
- Grade 1C
- Strong recommendation, low or very low quality evidence (1C)
- Recommendation can apply to most patients in many circumstances. Higher quality research is likely to have an important impact on our confidence in the estimate of effect and may well change the estimate.

Eberhard Rabe, Hugo Partsch, Juerg Hafner, Christopher Lattimer et al
Indications for medical compression stockings in venous and lymphatic disorders:
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SVT and compression

- *Practical advice in V-SVT*
- A NSAID ointment applied to the inflamed vein section, covered with gauze. No scientific evidence
- An eccentric reinforcement of compression. No scientific evidence

Partsch H, Rabe E, Stemmer R.
Superficial thrombosis. Compression therapy of the extremities,
Vol. Chapter 10.1.4.2. Paris: Phlebologiques Françaises; 2000. p. 300- 4.



SVT and compression

- *Practical advice*
- It is recommended that the compression bandage should exceed the thrombosed section by **at least 10 cm**.
- Compression should be applied for at least **2 weeks**, but in varicose patients, it should be continued as a chronic treatment.

Partsch H, Rabe E, Stemmer R.
Superficial thrombosis. Compression therapy of the extremities,
Vol. Chapter 10.1.4.2. Paris: Phlebologiques Francaises; 2000. p. 300- 4.

SVT and compression

- *Practical advice*
- In order to increase pressure an additional thigh stocking or a compression bandage can be applied.



Partsch H, Rabe E, Stemmer R.
Superficial thrombosis. Compression therapy of the extremities,
Vol. Chapter 10.1.4.2. Paris: Phlebologiques Francaises; 2000. p. 300- 4.

SVT and compression

- *Practical advice*
- The patient must walk regularly and avoid prolonged periods of being seated or standing.

Partsch H, Rabe E, Stemmer R.
Superficial thrombosis. Compression therapy of the extremities,
Vol. Chapter 10.1.4.2. Paris: Phlebologiques Francaises; 2000. p. 300- 4