EVIDENCE BASED STATEMENT

DOMAIN 06, Statement 06

TOPIC: "Proper treatment of superficial venous thrombosis"

SEARCH TERMS & SOURCES

("superficial venous thrombosis" OR "superficial thrombophlebitis") AND
("treatment") AND ("meta analysis" OR "Systematic Review" OR "guidelines")

INCLUSION CRITERIA

Systematic review or meta-analysis, 2012-2022
Focused on SVT treatment evidence
Available in English

SEARCH RESULT BEFORE - AFTER SELECTION

36 – 5

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. *Kakkos SK, Gohel M, Baekgaard N, et al. European Society for Vascular Surgery (ESVS) 2021 Clinical Practice Guidelines on the Management of Venous Thrombosis
2. Duffett L, Kearon C, Rodger M, et al. Treatment of Superficial Vein Thrombosis: A Systematic Review and Meta-Analysis. Thromb Haemost. 2019 Mar;119(3):479-489. doi: 10.1055/s-0039-1677793. Epub 2019 Feb 4. PMID: 30716777.
3. Di Nisio M, Wichers IM, Middeldorp S. Treatment for superficial thrombophlebitis of the leg. Cochrane Database Syst Rev. 2018 Feb 25;2(2):CD004982
4. Beyer-Westendorf J. Controversies in venous thromboembolism: to treat or not to treat superficial vein thrombosis. Hematology 2014, the American Society of Hematology Education Program Book. 2017 Dec 8;2017(1):223-30.
5. Kearon C, Akl EA, Comerota AJ, et al. Antithrombotic Therapy for VTE Disease: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. Chest 2012;141(Suppl):e419S-94S.
6. Sullivan V, Denk PM, Sonnad SS, et al. Ligation versus anticoagulation: treatment of above-knee superficial thrombophlebitis not involving the deep venous system. J Am Coll Surg. 2001 Nov;193(5):556-62. doi: 10.1016/s1072-7515(01)01043-2. PMID: 11708514.

EVIDENCE BASED STATEMENT

Domain 6; Statement 6

IDENTIFIED REFERENCES

1. de Almeida MJ, Guillaumon AT, Miquelin D, Joviliano EE, Hafner L, Sobreira ML, Geiger MA, Moura R, Raymundo S, Yoshida WB. Guidelines for superficial venous thrombosis. J Vasc Bras. 2019 Nov 20;18:e20180105. doi: 10.1590/1677-5449.180105. PMID: 31807127; PMCID: PMC6880617.
2. Di Nisio M, Wichers IM, Middeldorp S. Treatment for superficial thrombophlebitis of the leg. Cochrane Database Syst Rev. 2018 Feb 25;2(2):CD004982. doi: 10.1002/14651858.CD004982.pub6. PMID: 29478266; PMCID: PMC6953389.
3. Sándor T. Felületes vénás thrombosis – ahogy ma látjuk [Superficial venous thrombosis. A state of art]. Orv Hetil. 2017 Jan;158(4):129-138. Hungarian. doi: 10.1556/650.2017.30618. PMID: 28116936.
4. Duffett L, Kearon C, Rodger M, Carrier M. Treatment of Superficial Vein Thrombosis: A Systematic Review and Meta-Analysis. Thromb Haemost. 2019 Mar;119(3):479-489. doi: 10.1055/s-0039-1677793. Epub 2019 Feb 4. PMID: 30716777.
5. Raffetto JD, Eberhardt RT. Benefit of anticoagulation for the treatment of lower extremity superficial venous thrombosis. J Vasc Surg Venous Lymphat Disord. 2015 Apr;3(2):236-41. doi: 10.1016/j.jvsv.2014.11.005. Epub 2015 Jan 17. PMID: 26993846.
6.

EVIDENCE BASED STATEMENT

Domain 6; Statement 6

TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 06, Statement 06, TOPIC: "Proper treatment of superficial venous thrombosis"

Superficial venous thrombosis can propagate into the deep venous system and lead to DVT or PE. Patients with a diagnosis of superficial thrombosis should undergo duplex ultrasonography to rule out deep venous thrombosis. This initial ultrasound can also delineate the length of the thrombosis, determine its proximity to the deep venous system, and evaluate venous incompetence for future treatment (**Raffetto JD, Eberhardt RT. Benefit of anticoagulation for the treatment of lower extremity superficial venous thrombosis. J Vasc Surg Venous Lymphat Disord. 2015 Apr;3(2):236-41. doi: 10.1016/j.jvsv.2014.11.005. Epub 2015 Jan 17. PMID: 26993846** ; **Kakkos SK, Gohel M, Baekgaard N, et al. European Society for Vascular Surgery (ESVS) 2021 Clinical Practice Guidelines on the Management of Venous Thrombosis**).

Treatments for superficial venous thrombosis are varied, and are aimed at preventing propagation of thrombus and reducing symptoms. In the first three months after diagnosis, rates of VTE range from 1.5% to 6.2% (**Kakkos SK, Gohel M, Baekgaard N, et al. European Society for Vascular Surgery (ESVS) 2021 Clinical Practice Guidelines on the Management of Venous Thrombosis**). Randomized clinical trial data support the use of fondaparinux for 45 days for treatment of superficial venous thrombosis of > 5 cm in length. This trial only included patients with SVT ≥ 3 cm from the deep venous junction. This approach has been associated with a rate of DVT and PE of 1.4 per 100 patient-years versus 10.5 per 100 patient-years for no therapy (**Duffett et al. 2019**). In patients with SVT closer ≤ 3 cm from the deep venous junction, therapeutic anticoagulation is recommended to prevent propagation (**Kakkos SK, Gohel M, Baekgaard N, et al. European Society for Vascular Surgery (ESVS) 2021 Clinical Practice Guidelines on the Management of Venous Thrombosis**). Other commonly accepted treatment modalities include low molecular weight heparins, DOACs (rivaroxaban), NSAIDs (for short-segment thrombophlebitis), surgical ligation of the greater saphenous vein (for proximal lower extremity superficial venous thrombosis), and symptomatic treatment with heat, compression, and mobilization. Treatment with rivaroxaban 10 mg for 45 days is non-inferior to fondaparinux 2.5 mg and can be suggested as alternative for patients who avoid injections (**Duffett L, Kearon C, Rodger M, Carrier M. Treatment of Superficial Vein Thrombosis: A Systematic Review and Meta-Analysis. Thromb Haemost. 2019 Mar;119(3):479-489**). However, evidence to support other interventions is limited and lower quality. Symptomatic management with NSAIDs or compression is unlikely to prevent DVT or PE. Surgical ligation and compression prevent progression and VTE relative to compression alone (**Di Nisio et al. 2018**), but is associated with the highest risk of PE **(Duffett L, Kearon C, Rodger M, Carrier M. Treatment of Superficial Vein Thrombosis: A Systematic Review and Meta-Analysis. Thromb Haemost. 2019 Mar;119(3):479-489)**. For superficial venous thrombosis near the deep venous junction, or in patients at high risk of DVT, longer courses of anticoagulation can be considered. Further studies are needed to determine the optimal treatment modality and duration of therapy (**Kakkos SK, Gohel M, Baekgaard N, et al. European Society for Vascular Surgery (ESVS) 2021 Clinical Practice Guidelines on the Management of Venous Thrombosis**).

EVIDENCE BASED STATEMENT

Domain 6; Statement 6

STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 06, Statement 06

Superficial venous thrombosis brings the risk of deep venous thrombosis and pulmonary embolism.

4 SELECTED ”REFEREENCES

1. Di Nisio M, Wichers IM, Middeldorp S. Treatment for superficial thrombophlebitis of the leg. Cochrane Database Syst Rev. 2018 Feb 25;2(2):CD004982
2. Duffett L, Kearon C, Rodger M, Carrier M. Treatment of Superficial Vein Thrombosis: A Systematic Review and Meta-Analysis. Thromb Haemost. 2019 Mar;119(3):479-489. doi: 10.1055/s-0039-1677793. Epub 2019 Feb 4. PMID: 30716777.
3. *Kakkos SK, Gohel M, Baekgaard N, Bauersachs R, Bellmunt-Montoya S, Black SA, Arina J, Elalamy I, Enzmann FK, Geroulakos G, Gottsäter A. European Society for Vascular Surgery (ESVS) 2021 Clinical Practice Guidelines on the Management of Venous Thrombosis 5.
4. Raffetto JD, Eberhardt RT. Benefit of anticoagulation for the treatment of lower extremity superficial venous thrombosis. J Vasc Surg Venous Lymphat Disord. 2015 Apr;3(2):236-41. doi: 10.1016/j.jvsv.2014.11.005. Epub 2015 Jan 17. PMID: 26993846.

identified LITERATURE BIAS

Studies of surgical treatments, LMWH, and DOACs often do not consider all relevant clinical endpoints, such as long-term rates of VTE.

SUGGESTED NEXT LINES OF RESEARCH

Role of DOACs, LMWH, and NSAIDs for treatment of superficial venous thrombosis. Efficacy and safety of endovenous thermal ablation in SVT in the view of symptomatic relief and VTE rates.