

EVIDENCE BASED STATEMENT

DOMAIN **01**, Statement **08**
TOPIC: “post-thrombotic syndrome”

SEARCH TERMS & SOURCES

(post-thrombotic syndrome) AND ((burden) OR (prevalence) OR (incidence))

INCLUSION CRITERIA

- Lower limb only
- Reviews
- Publication < 10 years, only ENG

SEARCH RESULT BEFORE - AFTER SELECTION

195/28

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Kahn SR. The post-thrombotic syndrome. Hematology Am Soc Hematol Educ Program. 2016 Dec 2;2016(1):413-418.
2. Ashrani AA, Heit JA. Incidence and cost burden of post-thrombotic syndrome. J Thromb Thrombolysis. 2009 Nov;28(4):465-76.

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IDENTIFIED REFERENCES

1. Chaitidis N, Kokkinidis DG, Papadopoulou Z, et al. Management of Post-thrombotic Syndrome: A Comprehensive Review. *Curr Pharm Des.* 2022;28(7):550-559.
2. Chopard R, Albertsen IE, Piazza G. Diagnosis and Treatment of Lower Extremity Venous Thromboembolism: A Review. *JAMA.* 2020 Nov 3;324(17):1765-1776.
3. Hajra A, Mathai SV, Ball S, et al. Management of Thrombotic Complications in COVID-19: An Update. *Drugs.* 2020 Oct;80(15):1553-1562.
4. Cushman M, Barnes GD, Creager MA, et al. A Scientific Statement From the American Heart Association and the International Society on Thrombosis and Haemostasis. *Circulation.* 2020 Aug 11;142(6):e85-e94.
5. Gautam G, Sebastian T, Klok FA. How to Differentiate Recurrent Deep Vein Thrombosis from Postthrombotic Syndrome. *Hamostaseologie.* 2020 Aug;40(3):280-291.
6. Engel ER, Nguyen ATH, Amankwah EK, et al. Predictors of postthrombotic syndrome in pediatric thrombosis: A systematic review and meta-analysis of the literature. *J Thromb Haemost.* 2020 Oct;18(10):2601-2612.
7. Muñoz Rodríguez FJ. Diagnosis of deep vein thrombosis. *Rev Clin Esp.* 2020 Jun 27:S0014-2565(20)30132-6.
8. Makedonov I, Kahn SR, Galanaud JP. Prevention and Management of the Post-Thrombotic Syndrome. *J Clin Med.* 2020 Mar 27;9(4):923.
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10. Serhal M, Barnes GD. Venous thromboembolism: A clinician update. *Vasc Med.* 2019 Apr;24(2):122-131
11. Moustafa A, Alim HM, Chowdhury MA, Eltahawy EA. Postthrombotic Syndrome: Long-Term Sequela of Deep Venous Thrombosis. *Am J Med Sci.* 2018 Aug;356(2):152-158.
12. Rabinovich A, Kahn SR. How I treat the postthrombotic syndrome. *Blood.* 2018 May 17;131(20):2215-2222.
13. Devis P, Knuttinen MG. Deep venous thrombosis in pregnancy: incidence, pathogenesis and endovascular management. *Cardiovasc Diagn Ther.* 2017 Dec;7(Suppl 3):S309-S319.
14. Wik HS, Enden TR, Ghanima W, et al. Diagnostic scales for the post-thrombotic syndrome. *Thromb Res.* 2018 Apr;164:110-115.
15. Appelen D, van Loo E, Prins MH, et al. Compression therapy for prevention of post-thrombotic syndrome. *Cochrane Database Syst Rev.* 2017 Sep 26;9(9):CD004174.
16. Winter MP, Scherthaner GH, Lang IM. Chronic complications of venous thromboembolism. *J Thromb Haemost.* 2017 Aug;15(8):1531-1540.
17. Undas A. Prothrombotic Fibrin Clot Phenotype in Patients with Deep Vein Thrombosis and Pulmonary Embolism: A New Risk Factor for Recurrence. *Biomed Res Int.* 2017;2017:8196256.
18. Pikovsky O, Rabinovich A. Prevention and treatment of the post-thrombotic syndrome. *Thromb Res.* 2018 Apr;164:116-124.
19. Wik HS, Ghanima W, Sandset PM, Kahn SR. Scoring Systems for Postthrombotic Syndrome. *Semin Thromb Hemost.* 2017 Jul;43(5):500-504.
20. Farrell JJ, Sutter C, Tavri S, Patel I. Incidence and interventions for post-thrombotic syndrome. *Cardiovasc Diagn Ther.* 2016 Dec;6(6):623-631.

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TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 01, Statement 8 , TOPIC: “post-thrombotic syndrome”

Around 25% of patients affected by a first episode of deep venous thrombosis (DVT) develop a post-thrombotic syndrome (PTS) in the following 2 years. **[Chaitidis N, Kokkinidis DG, Papadopoulou Z, et al. Management of Post-thrombotic Syndrome: A Comprehensive Review. Curr Pharm Des. 2022;28(7):550-559]**

The same PTS diagnosis is not univocal in the different centers around the world, therefore even the incidence and related burden has been reported in a heterogenous way in the scientific literature, reaching up to 60% of individuals previously affected by a DVT.

Up to 10% of thrombotic patients are expected to develop skin ulceration in the following 2 years.

The risk of symptoms and sign related to PTS has been reported along many years following the first thrombotic episode, highlighting the need of a constant patient care, together with proper public health awareness development.

Risk factors for PTS development have been identified in proximal vs distal DVT, obesity, persistent D-dimer elevation, contralateral limb DVT, recurrent thrombosis, severe valvular incompetence, advancing age and varicose veins. Nevertheless, making an objective assessment of PTS risk factors and burden is particularly challenging since there is no global standardization and agreement in the definition and in the severity scoring.

[Kahn SR. The post-thrombotic syndrome. Hematology Am Soc Hematol Educ Program. 2016 Dec 2;2016(1):413-418].

PTS demonstrated to be an extremely expensive complication of DVT in several countries, contribution to more than 80% of the cost associated with the same thrombosis. Therefore, PTS prevention becomes mandatory for both patient proper management and for health-cost control.

[Ashrani AA, Heit JA. Incidence and cost burden of post-thrombotic syndrome. J Thromb Thrombolysis. 2009 Nov;28(4):465-76].

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STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 01, Statement 8 “post-thrombotic syndrome burden”
“more than 50% of patients experiencing a leg thrombosis might develop complications in the following years”

SELECTED REFERENCES

1. *Chaitidis N, Kokkinidis DG, Papadopoulou Z, et al. Management of Post-thrombotic Syndrome: A Comprehensive Review. *Curr Pharm Des.* 2022;28(7):550-559
2. Kahn SR. The post-thrombotic syndrome. *Hematology Am Soc Hematol Educ Program.* 2016 Dec 2;2016(1):413-418
3. Ashrani AA, Heit JA. Incidence and cost burden of post-thrombotic syndrome. *J Thromb Thrombolysis.* 2009 Nov;28(4):465-76

identified LITERATURE BIAS

Lack of globally agreed PTS definition and scoring with consequent heterogeneity in burden assessment

SUGGESTED NEXT LINES OF RESEARCH

Consensus on PTS definition and scoring