EVIDENCE BASED STATEMENT

DOMAIN 06, Statement 07

TOPIC: "**Acute ilio-femoral thrombosis management**"

SEARCH TERMS & SOURCES

("ilio-femoral venous thrombosis" OR "proximal DVT" OR "ilio-femoral thrombosis" "femoral thrombosis")
AND ("management" OR "treatment") AND ("meta analysis" OR "systematic Review" OR "guidelines")

INCLUSION CRITERIA

Systematic review or meta-analysis (2012-2022)
Focused on management of proximal DVT

SEARCH RESULT BEFORE - AFTER SELECTION

32 – 8

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Broderick C, Watson L, Armon MP. Thrombolytic strategies versus standard anticoagulation for acute deep vein thrombosis of the lower limb. Cochrane Database of Systematic Reviews. 2021(1).
2. Brenner B, Hull R, Arya R, et al. Evaluation of unmet clinical needs in prophylaxis and treatment of venous thromboembolism in high-risk patient groups: cancer and critically ill. Thromb J. 2019 Apr 15;17:6.
3. Vedantham S. Thrombectomy and thrombolysis for the prevention and treatment of postthrombotic syndrome. Hematology 2014, the American Society of Hematology Education Program Book. 2017 Dec 8;2017(1):681-5.
4. Kearon C, Akl EA, Ornelas J, et al. Antithrombotic therapy for VTE disease: CHEST guideline and expert panel report. Chest. 2016 Feb 1;149(2):315-52.
5. Liu D, Peterson E, Dooner J, et al. Diagnosis and management of iliofemoral deep vein thrombosis: clinical practice guideline. CMAJ. 2015 Nov

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IDENTIFIED REFERENCES

1. Ashrafi M, Ahmad SB, Antoniou SA, Khan T, Antoniou GA. Treatment Strategies for Proximal Deep Vein Thrombosis: A Network Meta-analysis of Randomised Controlled Trials. Eur J Vasc Endovasc Surg. 2022 Feb;63(2):323-334.
2. Rabe D, Partsch H, Heidl G, Hirschl M, Kundi M, Rabe E, Pannier F. Compression treatment in acute symptomatic proximal deep venous thrombosis - Results of a worldwide survey. Phlebology. 2021 Aug;36(7):526-534.
3. Goldhaber SZ, Magnuson EA, Chinnakondepalli KM, et al. Catheter-directed thrombolysis for deep vein thrombosis: 2021 update. Vasc Med. 2021 Dec;26(6):662-669. doi: 10.1177/1358863X211042930. Epub 2021 Oct 4. PMID: 34606385.
4. Diniz J, Coelho A, Mansilha A. Endovascular treatment of iliofemoral deep venous thrombosis: is there enough evidence to support it? A systematic review with meta-analysis. Int Angiol. 2020 Apr;39(2):93-104.
5. Tran HA, Gibbs H, Merriman E, et al. New guidelines from the Thrombosis and Haemostasis Society of Australia and New Zealand for the diagnosis and management of venous thromboembolism. Med J Aust. 2019 Mar;210(5):227-235.
6. Wang CN, Deng HR. Percutaneous Endovenous Intervention Plus Anticoagulation versus Anticoagulation Alone for Treating Patients with Proximal Deep Vein Thrombosis: A Meta-analysis and Systematic Review. Ann Vasc Surg. 2018 May;49:39-48. doi: 10.1016/j.avsg.2017.09.027. Epub 2018 Feb 15. PMID: 29454036.
7. Watson L, Broderick C, Armon MP. Thrombolysis for acute deep vein thrombosis. Cochrane Database Syst Rev. 2016 Nov 10;11(11):CD002783. doi: 10.1002/14651858.CD002783.pub4. Update in: Cochrane Database Syst Rev. 2021 Jan 19;1:CD002783. PMID: 27830895; PMCID: PMC6464997.
8. Jenkins JS, Michael P. Deep Venous Thrombosis: An Interventionalist's Approach. Ochsner J. 2014 Winter;14(4):633-40. PMID: 25598728; PMCID: PMC4295740.

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TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 06, Statement 07, TOPIC: "**Acute ilio-femoral thrombosis management**"

Iliofemoral DVT, which refers to DVT in the common femoral veins, iliac veins, and inferior vena cava, is associated with high rates of post-thrombotic syndrome (PTS) and complications such as venous ulcers. Iliofemoral DVT is diagnosed using ultrasonography or CT/MR venography. Anticoagulation for a minimum of three months is the standard of care for patients with iliofemoral DVT (**Liu D, Peterson E, Dooner J, et al. Diagnosis and management of iliofemoral deep vein thrombosis: clinical practice guideline. CMAJ. 2015 Nov 17;187(17):1288-96**).

In recent years, percutaneous catheter-directed thrombolysis (PCDT) has emerged as a major treatment modality for ilio-femoral DVT. Three randomized trials (CAVA, CAVENT, and ATTRACT) in patients with lower extremity DVT have helped establish the clinical benefits of PCDT. These studies did not show a decrease in rates of PTS among patients with lower extremity DVT compared to anticoagulation alone. However, subgroup analyses established that PCDT significantly reduces early DVT symptoms and the *severity* of PTS in patients with iliofemoral DVT (**Goldhaber SZ, Magnuson EA, Chinnakondepalli KM, et al. Catheter-directed thrombolysis for deep vein thrombosis: 2021 update. Vasc Med. 2021 Dec;26(6):662-669. doi: 10.1177/1358863X211042930. Epub 2021 Oct 4. PMID: 34606385**). Long-term follow-up data also suggested a decrease in the incidence of PTS among patients with iliofemoral DVT (RR 0.82, 95% CI 0.71 to 0.94). PCDT also resulted in greater rates of total clot lysis (**Broderick C, Watson L, Armon MP. Thrombolytic strategies versus standard anticoagulation for acute deep vein thrombosis of the lower limb. Cochrane Database of Systematic Reviews. 2021).** There may be a slight increase in bleeding complications with PCDT compared to anticoagulation, so strict criteria should be used to determine patients most likely to benefit from this intervention. Ideal candidates for therapy are younger than 65 with good mobility and low bleeding risk. Patients who undergo PCDT still require anticoagulant therapy to prevent DVT recurrence (**Goldhaber SZ, Magnuson EA, Chinnakondepalli KM, et al. Catheter-directed thrombolysis for deep vein thrombosis: 2021 update. Vasc Med. 2021 Dec;26(6):662-669. doi: 10.1177/1358863X211042930. Epub 2021 Oct 4. PMID: 34606385**). More large randomized controlled trials are needed to determine the benefit of catheter-directed thrombolysis in iliofemoral DVT (***Broderick C, Watson L, Armon MP. Thrombolytic strategies versus standard anticoagulation for acute deep vein thrombosis of the lower limb. Cochrane Database of Systematic Reviews. 2021**; **Vedantham S. Thrombectomy and thrombolysis for the prevention and treatment of postthrombotic syndrome. Hematology 2014, the American Society of Hematology Education Program Book. 2017 Dec 8;2017(1):681-5**.). In recent years, DOACs have become mainstays of DVT therapy because of their efficacy at preventing recurrence and improved safety profile. Because many trials of PCDT occurred before DOACs were in widespread use, PCDT may not compare as favorably to DOACs as to LMWH and vitamin K inhibitors (Goldhaber et al. 2021). Endovascular or open surgical thrombectomy is standard of care for phlegmasia cerulea dolens, a condition characterized by limb-threatening venous occlusion (**Goldhaber SZ, Magnuson EA, Chinnakondepalli KM, et al. Catheter-directed thrombolysis for deep vein thrombosis: 2021 update. Vasc Med. 2021 Dec;26(6):662-669. doi: 10.1177/1358863X211042930. Epub 2021 Oct 4. PMID: 34606385**).

EVIDENCE BASED STATEMENT

Domain 6; Statement 7

STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 06, Statement 07

Special venous catheters can be used by qualified experts to treat specific cases of thrombosis. Guidelines vary among countries and require careful specialist evaluation of the risks and benefits.

4 SELECTED REFEREENCES

1. *Broderick C, Watson L, Armon MP. Thrombolytic strategies versus standard anticoagulation for acute deep vein thrombosis of the lower limb. Cochrane Database of Systematic Reviews. 2021(1).
2. Goldhaber SZ, Magnuson EA, Chinnakondepalli KM, Cohen DJ, Vedantham S. Catheter-directed thrombolysis for deep vein thrombosis: 2021 update. Vascular Medicine. 2021 Dec;26(6):662-9.
3. Liu D, Peterson E, Dooner J, Baerlocher M, Zypchen L, Gagnon J, Delorme M, Sing CK, Wong J, Guzman R, Greenfield G. Diagnosis and management of iliofemoral deep vein thrombosis: clinical practice guideline. CMAJ. 2015 Nov 17;187(17):1288-96.
4. Vedantham S. Thrombectomy and thrombolysis for the prevention and treatment of postthrombotic syndrome. Hematology 2014, the American Society of Hematology Education Program Book. 2017 Dec 8;2017(1):681-5.

identified LITERATURE BIAS

Lack of long-term clinical and quality of life data in studies comparing anticoagulation and catheter-directed thrombolysis. Few large RCTs. Many trials comparing CDT to warfarin or LMWH, but few comparing to DOACs (lower bleeding and PTS risk).

SUGGESTED NEXT LINES OF RESEARCH

Randomized controlled trials to determine which subsets of patients derive the most benefit from CDT. Trials comparing CDT to DOACs.