EVIDENCE BASED STATEMENT

DOMAIN 04, Statement 05

TOPIC: "Deep venous reflux management"

SEARCH TERMS & SOURCES

(deep venous) AND (reflux)

INCLUSION CRITERIA

- Reviews
- Publication < 10 years
- only ENG

SEARCH RESULT BEFORE - AFTER SELECTION

58/19

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Lim KH, Hill G, Tarr G, et al. Deep venous reflux definitions and associated clinical and physiological significance. J Vasc Surg Venous Lymphat Disord. 2013 Oct;1(4):325-32
2. Nakayama M. The Incidence, Clinical Importance and Management of Incompetent Gastrocnemius Vein. Ann Vasc Dis. 2016;9(1):35-41
3. Labropoulos N, Tassiopoulos AK, Kang SS, et al. Prevalence of deep venous reflux in patients with primary superficial vein incompetence. J Vasc Surg. 2000 Oct;32(4):663-8.
4. Mayberry JC, Moneta GL, DeFrang RD, et al. The influence of elastic compression stockings on deep venous hemodynamics. J Vasc Surg. 1991 Jan;13(1):91-9.
5. Cornwall JV, Doré CJ, Lewis JD. Graduated compression and its relation to venous refilling time. Br Med J (Clin Res Ed). 1987 Oct 31;295(6606):1087-90
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EVIDENCE BASED STATEMENT

Domain 4; Statement 5

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. Raffetto JD, Ligi D, Maniscalco R, et al. Why Venous Leg Ulcers Have Difficulty Healing: Overview on Pathophysiology, Clinical Consequences, and Treatment. J Clin Med. 2020 Dec 24;10(1):29.
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4. Makedonov I, Kahn SR, Galanaud JP. Prevention and Management of the Post-Thrombotic Syndrome. J Clin Med. 2020 Mar 27;9(4):923.
5. Garcia R, Labropoulos N, Gasparis AP, Elias S. Present and future options for treatment of infrainguinal deep vein disease. J Vasc Surg Venous Lymphat Disord. 2018 Sep;6(5):664-671.
6. Dronkers CEA, Mol GC, Maraziti G, et al. Predicting Post-Thrombotic Syndrome with Ultrasonographic Follow-Up after Deep Vein Thrombosis: A Systematic Review and Meta-Analysis. Thromb Haemost. 2018 Aug;118(8):1428-1438.
7. Kiguchi MM, Abramowitz SD. Open Surgical Management of Deep Venous Occlusive Disease. Tech Vasc Interv Radiol. 2018 Jun;21(2):117-122.
8. Attaran RR. Latest Innovations in the Treatment of Venous Disease. J Clin Med. 2018 Apr 11;7(4):77.
9. Lichtenberg M, de Graaf R, Erbel C. Standards for recanalisation of chronic venous outflow obstructions. Vasa. 2018 Jun;47(4):259-266.
10. Garcia R, Labropoulos N. Duplex Ultrasound for the Diagnosis of Acute and Chronic Venous Diseases. Surg Clin North Am. 2018 Apr;98(2):201-218.
11. Montminy ML, Jayaraj A, Raju S. A systematic review of the efficacy and limitations of venous intervention in stasis ulceration. J Vasc Surg Venous Lymphat Disord. 2018 May;6(3):376-398.e1.
12. Vosicka K, Qureshi MI, Shapiro SE, et al. Post thrombotic syndrome following deep vein thrombosis in paediatric patients. Phlebology. 2018 Apr;33(3):185-194.
13. Rabinovich A, Kahn SR. The postthrombotic syndrome: current evidence and future challenges. J Thromb Haemost. 2017 Feb;15(2):230-241.
14. Weber B, Hafner J, Willenberg T, Hoerstrup SP. Bioengineered valves for the venous circulation. Expert Rev Med Devices. 2016 Nov;13(11):1005-1011.
15. Dezotti NRA, Dalio MB, Ribeiro MS, et al. The clinical importance of air plethysmography in the assessment of chronic venous disease. J Vasc Bras. 2016 Oct-Dec;15(4):287-292.
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EVIDENCE BASED STATEMENT

Domain 04; Statement 05

TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 04, Statement 05, TOPIC: "Deep venous reflux management"

Deep venous reflux definition is not globally agreed in the scientific community. In the same way, the reflux extent and hemodynamic impairment to make it considered significant have not yet been univocally characterized. Confounding factors such as the different definitions of "segmental" reflux and the frequent coexistence of superficial venous reflux make this task challenging. Deep reflux extended all the way to the knee and calf demonstrated to be associated with a severe compromission of the lower limb drainage, independently by the eventual superficial venous reflux coexistence. A system to classify deep venous reflux severity not based just on the anatomical location is needed.

***[Lim KH, Hill G, Tarr G, et al. Deep venous reflux definitions and associated clinical and physiological significance. J Vasc Surg Venous Lymphat Disord. 2013 Oct;1(4):325-32]**

Several options have been proposed for deep venous reflux management, among which ligation of deep veins, transposition, transplantation, primary valve repair, autogenous and artificial valve substitutes.

The reflux primary or secondary etiology, patient's specific preference and the surgical skills determine the technical choice that, whatever it is, so far and up to our knowledge, produced heterogeneous results, with a limited number of treated cases and not significantly long follow up.

Along the years many attempts to use a biologic or artificial valve has been reported, nevertheless the outcome remains underpowered in number of treated cases and followed up for a short time.

[Garcia R, Labropoulos N, Gasparis AP, Elias S. Present and future options for treatment of infrainguinal deep vein disease. J Vasc Surg Venous Lymphat Disord. 2018 Sep;6(5):664-671].

In this context proper conservative measures remain of pivotal importance for deep venous reflux. Among these, graduated compression, whenever appropriately prescribed, demonstrated objective benefit in venous hypertensions reduction.

[Cornwall JV, Doré CJ, Lewis JD. Graduated compression and its relation to venous refilling time. Br Med J (Clin Res Ed). 1987 Oct 31;295(6606):1087-90]

Further investigations are needed to identify the most effective protocol in deep venous reflux management.

EVIDENCE BASED STATEMENT

Domain 4; Statement 5

STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 04, Statement 05

"**Deep venous reflux can be managed by proper elastic compression and, eventually , by superficial reflux treatment. Deep venous reflux surgical treatment is to be performed only in highly specialized centers and it's still in need of strong scientific validation.** "

SELECTED REFEREENCES

1. **Lim KH, Hill G, Tarr G, et al. Deep venous reflux definitions and associated clinical and physiological significance. J Vasc Surg Venous Lymphat Disord. 2013 Oct;1(4):325-32**
2. **Garcia R, Labropoulos N, Gasparis AP, Elias S. Present and future options for treatment of infrainguinal deep vein disease. J Vasc Surg Venous Lymphat Disord. 2018 Sep;6(5):664-671**
3. **Cornwall JV, Doré CJ, Lewis JD. Graduated compression and its relation to venous refilling time. Br Med J (Clin Res Ed). 1987 Oct 31;295(6606):1087-90**

identified LITERATURE BIAS

Few data regarding isolated deep reflux and without previous thrombosis

SUGGESTED NEXT LINES OF RESEARCH

Head to head comparison among different deep venous reflux approaches, with properly powered study population and long follow up