

# EVIDENCE BASED STATEMENT

DOMAIN **04**, Statement **10**

TOPIC: “Conservative management for vascular malformations”

## SEARCH TERMS & SOURCES

Query used for the literature search / Search engines used (PubMed, Embase, Cinhal and the Cochrane)  
(( "Vascular Malformations/drug therapy"[Mesh] OR "Vascular Malformations/prevention and control"[Mesh] OR "Vascular Malformations/radiotherapy"[Mesh] OR "Vascular Malformations/surgery"[Mesh] OR "Vascular Malformations/therapy"[Mesh] ))  
AND "Lower Extremity"[Mesh]

## INCLUSION CRITERIA

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

## SEARCH RESULT BEFORE - AFTER SELECTION

9 (before) - 5 (after selection)

## PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Langbroek GB, Horbach SE, van der Vleuten CJ, Ubbink DT, van der Horst CM. Compression therapy for congenital low-flow vascular malformations of the extremities: A systematic review. *Phlebology*. 2018;**33**(1):5-13
2. Lee BB. ISVI-IUA consensus document diagnostic guidelines of vascular anomalies: vascular malformations and hemangiomas. *Int Angiol*. 2015 Aug;**34**(4):333-74.
3. Markovic JN, Shortell CE. Multidisciplinary treatment of extremity arteriovenous malformations. *Journal of vascular surgery Venous and lymphatic disorders*. 2015;**3**(2):209-18
4. Lidsky ME, Markovic JN, Miller MJ, Jr, Shortell CK. Analysis of the treatment of congenital vascular malformations using a multidisciplinary approach. *J Vasc Surg*. 2012;**56**(5):1355-62;

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### IDENTIFIED REFERENCES

1. Ornelas-Flores MC, Rojas-Reyna GA, Hinojosa-Gutiérrez CG, Leo SG. Endovascular management of a complex high-flow lower limb arteriovenous malformation: Case report and literature review. *Cir Cir.* 2021;89(S1):14-9.
2. Gao X, Guo J, Tong Z, Guo L, Zhang J, Gu Y. Successful Treatment of Acquired Arteriovenous Fistulas after Iliac Vein Thrombosis. *Ann Vasc Surg.* 2020;62:499.e15-.e20.
3. Qiu J, Zhou W, Zhou W, Xiong J. Bilateral Persistent Sciatic Artery: Literature Review and Case Report Follow-up for More than Five Years. *Ann Vasc Surg.* 2017;41:282.e5-.e10.
4. Parin L, Madhu G, Anil T, Sonali B. Anesthetic Management of a Patient with Cowden Syndrome and Review of Anesthetic Concerns. *J Clin Anesth.* 2017;38:173-4.
5. Yang S, Ranum K, Malone M, Nazzal M. Bilateral persistent sciatic artery with aneurysm formation and review of the literature. *Ann Vasc Surg.* 2014;28(1):264.e1-7.

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### TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 04, Statement 10, TOPIC: “Conservative management for vascular malformations”

The best opportunity for improved quality-of-life for patients with AV malformations is early diagnosis and management using a combination of conservative, endovascular, and surgical treatments provided by a multidisciplinary team. A multidisciplinary team (specialists from vascular, plastic, otolaryngologic, orthopedic, or pediatric surgery, radiology, dermatology and hematology) is necessary to properly diagnose and coordinate care among disciplines when dealing with these complex cases.

**[Markovic JN, Shortell CE. Multidisciplinary treatment of extremity arteriovenous malformations. Journal of vascular surgery Venous and lymphatic disorders. 2015;3(2):209-18].**

**[Lidsky ME, Markovic JN, Miller MJ, Jr., Shortell CK. Analysis of the treatment of congenital vascular malformations using a multidisciplinary approach. J Vasc Surg. 2012;56(5):1355-62].**

Only patients who are symptomatic or have complications of their vascular malformation are considered candidates for therapeutic intervention, given the potential for additional morbidity related to any intervention. Conservative management can be a short- or long-term treatment strategy based on the patient's symptoms, risks to the limb, and functional limitations and includes extremity compression, medications, physical therapy, and ongoing clinical monitoring.

Compression therapy (20 to 30 mmHg, 30 to 40 mmHg) is frequently used as a first-line therapy for low-flow vascular malformations for the alleviation of symptoms. The available evidence suggests that compression therapy may reduce intravascular coagulation, improve symptoms and appearance, diminish oedema, and protect against minor trauma.

**[Lee BB, Baumgartner I, Berlien HP, Bianchini G, Burrows P, Do YS, et al. Consensus Document of the International Union of Angiology (IUA)-2013. Current concept on the management of arterio-venous management. Int Angiol. 2013;32(1):9-36].**

**\*[Langbroek GB, Horbach SE, van der Vleuten CJ, Ubbink DT, van der Horst CM. Compression therapy for congenital low-flow vascular malformations of the extremities: A systematic review. Phlebology. 2018;33(1):5-13].**

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### STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 04, Statement 10

**“Conservative treatment, mainly by compression, is to be taken into consideration for most asymptomatic lower limb venous malformations, together with a follow up by experts in the specific malformations field”**

### SELECTED REFERENCES

1. Markovic JN, Shortell CE. Multidisciplinary treatment of extremity arteriovenous malformations. *Journal of vascular surgery Venous and lymphatic disorders*. 2015;3(2):209-18
2. Lidsky ME, Markovic JN, Miller MJ, Jr., Shortell CK. Analysis of the treatment of congenital vascular malformations using a multidisciplinary approach. *J Vasc Surg*. 2012;56(5):1355-62
3. Lee BB, Baumgartner I, Berlien HP, Bianchini G, Burrows P, Do YS, et al. Consensus Document of the International Union of Angiology (IUA)-2013. Current concept on the management of arterio-venous management. *Int Angiol*. 2013;32(1):9-36
4. \*Langbroek GB, Horbach SE, van der Vleuten CJ, Ubbink DT, van der Horst CM. Compression therapy for congenital low-flow vascular malformations of the extremities: A systematic review. *Phlebology*. 2018;33(1):5-13

### identified LITERATURE BIAS

Lack of homogeneity in the assessed study populations

### SUGGESTED NEXT LINES OF RESEARCH

1. Effectiveness of compression therapy in the treatment of congenital vascular malformations
2. Compression dosing & type for venous malformations