

Narrowing of superficial and deep veins by a ready-to-wear compression device demonstrated by magnetic resonance imaging (MRI)

Mosti G¹, Partsch H²

¹ Angiology Department Clinica M.D. Barbantini, Lucca, Italy

² Medical University Vienna, Austria

Introduction:

The question as to whether compression causes venous narrowing is still a subject of controversial discussion and depends on the relationship between intravenous pressure and compression pressure.

Aim:

...to show the influence of a ready-to wear compression device on the diameter of leg veins by MRI (magnetic resonance imaging).

Material and Methods

Cross-sections were measured in the area of the largest calf diameter in a patient in the standing position, without compression and with a ready to-wear compression device* recommended for small and leg ulcers with an interface pressure of 23 mmHg at the mid calf level. This will be demonstrated in one out of 11 patients investigated with MRI.

Results

Venous narrowing can clearly be shown in the superficial and deep veins, and in particular in the muscular sinus. Under compression, the cross-section of the leg appears nearly circular (example shown in Fig. 1).

Conclusion

The ready-to-wear compression device*, which exerts an average pressure of 23 mmHg at the centre of the calf in the supine position, causes considerable narrowing of superficial and deep veins, as well as closure of the muscular sinus.

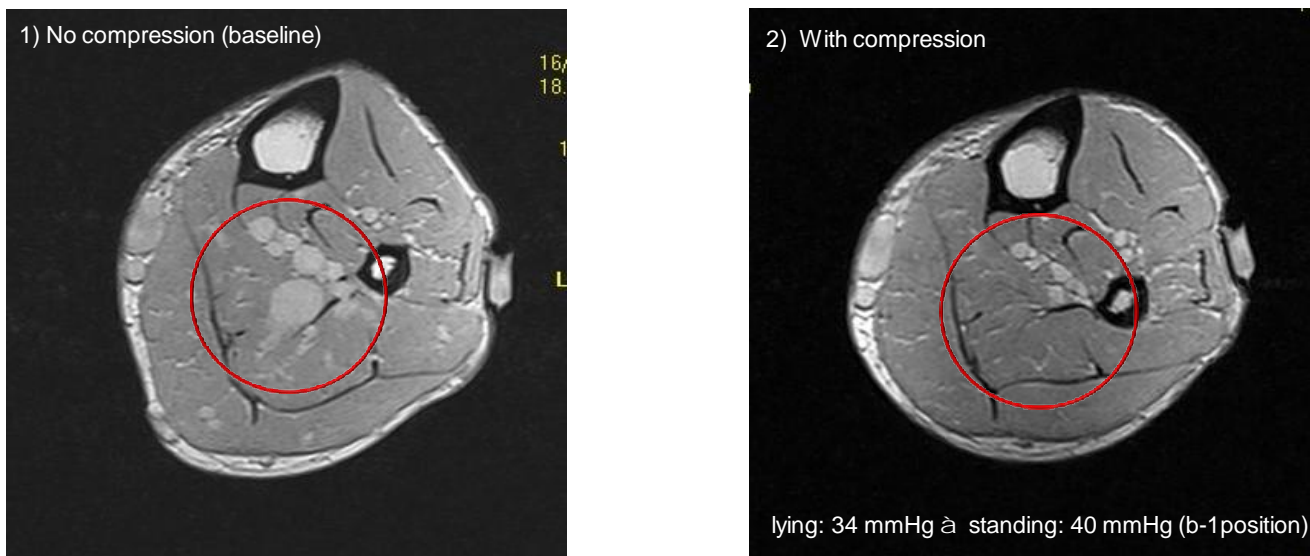


Fig. 1: MRI cross-section in the area of largest calf diameter in a standing patient without compression (1) and with compression with a ready-to-wear compression device* (2)

* Rosidal® mobil, Lohmann & Rauscher