

Compression massage after endo venous varicose vein therapy

Ulf Th Zierau*

Zierau UT. Compression massage after endo venous varicose vein therapy. J Phlebol Lymphol 2020;13(1):17-19.

Intermittently pneumatic compression (IPC) therapy after truncal varicose vein ablation -A massage of the leg seconds after a therapy of truncal

varicose veins with different techniques is not standard. And it is in partly controversial discussion because is not tolerable for the patient after radical surgery or thermal ablation because of pain.

Key Words: Varicose vein; Compression massage; Radical surgery

INTRODUCTION

The guidelines of the German Society of Phlebology see the following advantages in intermittently compression therapy-used postoperatively:

Recommendation 10: IPC can be used in patients with post-traumatic edema. It reduces edema, reduces the infection rate preoperatively and improves soft tissue healing and painfulness.

HISTORY-MASSAGE OF THE LEG AFTER VENASEAL OR SEALING FOAM THERAPY

Murat and Clay used the first compression device in 1835, and after 1930 devices for the treatment of vascular diseases were developed. In 1955 Sampson and Kirby first described a 14-chamber compression massage [1,2].

However, it took another 26 years before the first multi-chamber compression device was brought onto the healthcare market by Zelikowski in 1981. He described a "milking mechanism". In the following years, devices were developed specifically for venous diseases, lymphatic diseases and arterial circulatory disorders [3].

All of these devices emulate the physiology of our human muscle-vein pump. Inflation and deflation of the air in the individual chambers mimics the effect of the calf muscle pump and massages the vein blood and lymphatic fluid out of the lower legs (Figure 1).

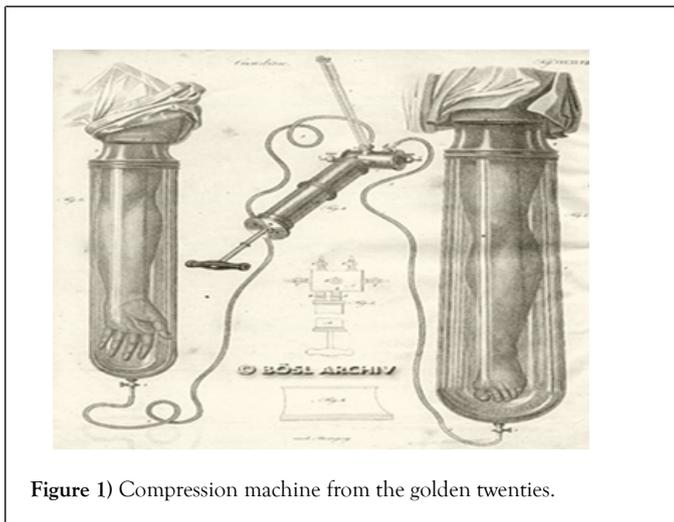


Figure 1) Compression machine from the golden twenties.

SAPHENION: COMPRESSION MASSAGE AFTER VEIN GLUE/MICROFOAM

Saphenion started 4 years ago at the Rostock Vein Care Center to offer all patients a compression massage of the treated legs immediately after varicose vein therapy with vein glue or after micro foam therapy with sealing foam. All patients gladly accepted this massage therapy of the operated legs using the 12-chamber massage computer immediately after the therapy [4].

During the last 48 months we treated with IPC 290 patients after VenaSeal® ablation of truncal varicose veins and 595 Patients after micro-foam therapy.

PATHOPHYSIOLOGICAL CONSIDERATIONS-IPC AFTER VARICOSE VEIN THERAPY

An inflammatory response of vascular and connective tissue after damaging of cells and parts of tissues is the normal and typical answer after the therapy of varicose veins. The response is trying to remove or to repair the cell-and tissue defects (Figure 2).

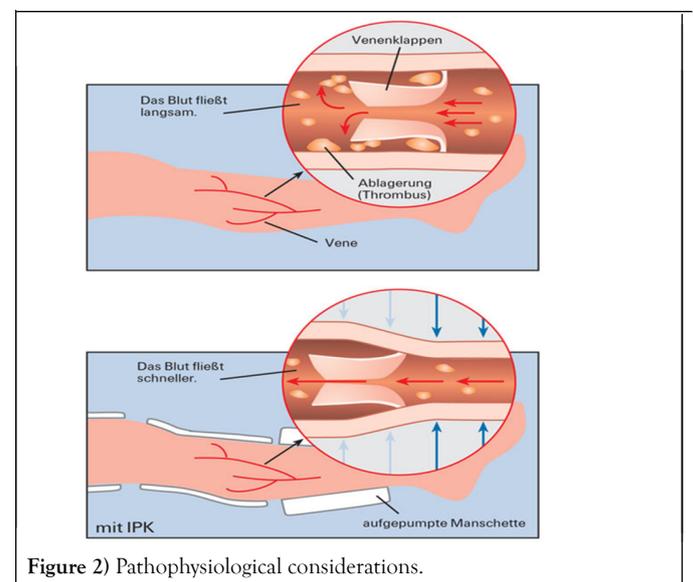


Figure 2) Pathophysiological considerations.

Saphenion Vein Care Center, Berlin, Germany

Correspondence: Ulf Th Zierau, Vascular Surgeon, Phlebologist, Endovascular Specialist Artery, Saphenion Vein Care Center, Berlin, Germany, E-mail: dr.zierau@yahoo.de

Received date: April 30, 2020; **Accepted date:** May 15, 2020; **Published date:** May 22, 2020



This open-access article is distributed under the terms of the Creative Commons Attribution Non-Commercial License (CC BY-NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits reuse, distribution and reproduction of the article, provided that the original work is properly cited and the reuse is restricted to noncommercial purposes. For commercial reuse, contact reprints@pulsus.com

The important effects of postoperative massage are reduction of tissue tension because of reduction of edema, the accelerated removal of cell debris and inflammatory mediators. The reduction of post op pain and about a shooting inflammatory reaction is also very important.

At the same time, the arterial inflow is improved and the venous outflow is increased. In addition to the general reduction in venous pressure in the leg veins, there is a reduction in the venous blood pool and existing lymphedema. Microcirculatory reduces the capillary pressure and thus improves the oxygen uptake from the capillaries as an immediate reaction.

The manual massage therapy or better the 12 - chambers - massage-computer so have a good effect. Because of these massage techniques we promote the regeneration of lymph collectors in the treated area.

The tissue scarring after ablation the truncal varicose veins or side branches are more softly and we are seeing secondary movement restriction after therapy much less (Figure 3).

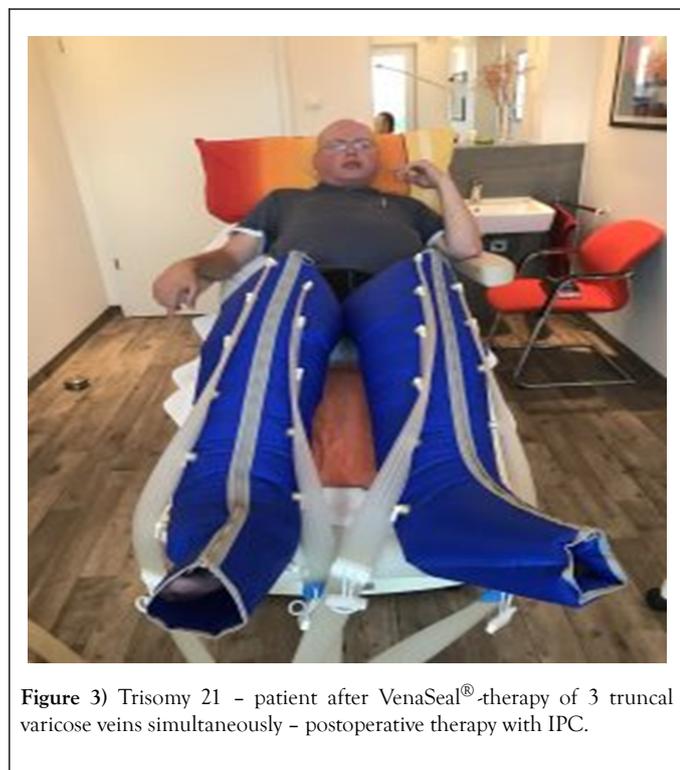


Figure 3) Trisomy 21 - patient after VenaSeal®-therapy of 3 truncal varicose veins simultaneously - postoperative therapy with IPC.

RESULTS-OUR FIRST EXPERIENCES WITH POSTOPERATIVE MASSAGE THERAPY

This new therapeutic regime we began 4 years before in our Rostock praxis. To today we treated 290 Patients with post op 12-chamber-massage after Sealing veins and 595 patients after micro-foam therapy during the post op follow up.

We ourselves were very surprised about the results!

In all 260 cases of VenaSeal®-ablation there were absolutely less indurations of the treated vein, no really vein string. We saw no more edemas, also the patients reported the same. On the contrary they reported about lighter legs without great edemas.

The micro-foam patients also had a good feeling after massage the treated legs. We found much less indurations and less hematomas and there weren't to be found new spider navies after the massage.

We did not used very often the post op massage after tumescent anesthesia in cases of thermal ablation with radio frequency. Here we've seen some pain in some cases. And we are cautious so-is compression massage possible?

This also corresponds to the relative contraindications for compression therapy-in the case of extensive (open) soft tissue injuries (radically surgery, thermal therapy) compression therapy should not be used initially.

Radical therapy methods (stripping) are no longer offered at Saphenion®, which is why we have no experience with the use of compression massage in these cases.

DISCUSSION-QUOTED FROM THE GUIDELINE FOR COMPRESSION THERAPY

The intermittent pneumatic compression therapy (IPC) consists in the prophylactic and therapeutic use of pneumatic alternating pressures for thromboembolic prophylaxis, decongestive therapy in edema diseases, improvement of arterial and venous perfusion with reduction of clinical symptoms and to promote wound healing [5].

We have treated last 4 years nearly 900 patients with the postoperative IPC. We are very surprised about the acceptance and the very good results in using ICP postoperatively in cases of VenaSeal®-ablation and micro - foam therapy [6,7].

Meanwhile the patients are asking for this intermittent compression therapy and it is a part of our standard therapy.

CONCLUSION

Following these guidelines, a compression massage is not recommended after extensive soft tissue defects, e.g. contraindicated after radical varicose vein therapy (stripping), however! We have no experiences with ICP in this radical therapy cases.

DISCLOSURE

I do not have any potential conflict of interest.

REFERENCES

1. Schreiber CS, Schupke SR, Breu FX, et al. Intermittierendepneumatische Kompression. IPK, AIK. 2018; 1-41.

2. Der-niedergelassene-arzt.de/praxis/die-intermittierende-pneumatische-kompressionstherapie. 2018.
 3. Földi E. Das postoperative Lymphödem: Das klinische Problem: Diagnostik und aktuelle Behandlungskonzepte. Phlebologie –Stuttgart. 2011; 40(3):123-26.
 4. Zierau UT. Intermittent compression massage therapy after varicose vein therapy. Surg Res. 2019; 1(1):1-2.
 5. Schupke SR, Schreiber CS. Auszug aus der S1-Leitlinie Intermittierende pneumatische Kompression (IPK, AIK). Phlebologie. 2018;47(5): 272-76.
 6. Zierau UT. Interventionen an Krampfadern –
Wielange Kompressionstherapie? 2018.
 7. Zierau UT. Intermittierende Kompressionsmassagen nach
Krampfadertherapie. 2019.
-
-