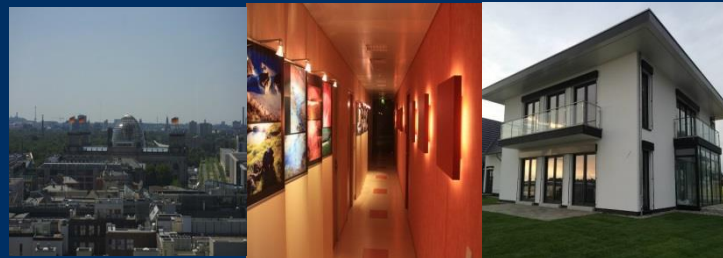


Sealing veins with the Venaseal™ Closure System

3-year-study: Results for 886 treated veins - Dr. U.Th.Zierau



Disclosure

- Speaker name: Ulf Zierau

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- I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest

VenaSeal™ - Closure System— our experience

Treatment with Cyanoacrylate

Since 1949 the chemical compound is known, first being used in operative medicine in the early 60s.

- ❑ Tissue adhesive or replacement of wound sutures
- ❑ Nearly all operative disciplines were using cyanoacrylate i.e. dermatology, ophthalmology, orthopedics, surgery orthodontics, interventional radiologists.
- ❑ The risk of allergic reaction is not real – we didn't find any report or scientific study in *medline*.

FDA – approval states: VenaSeal™ is bio-compatible, bio-resorptive, not carcinogenic and not allergenic!

VenaSeal™ Closure System – our experience

Since August 3 2015 we treated 886 truncal veins.

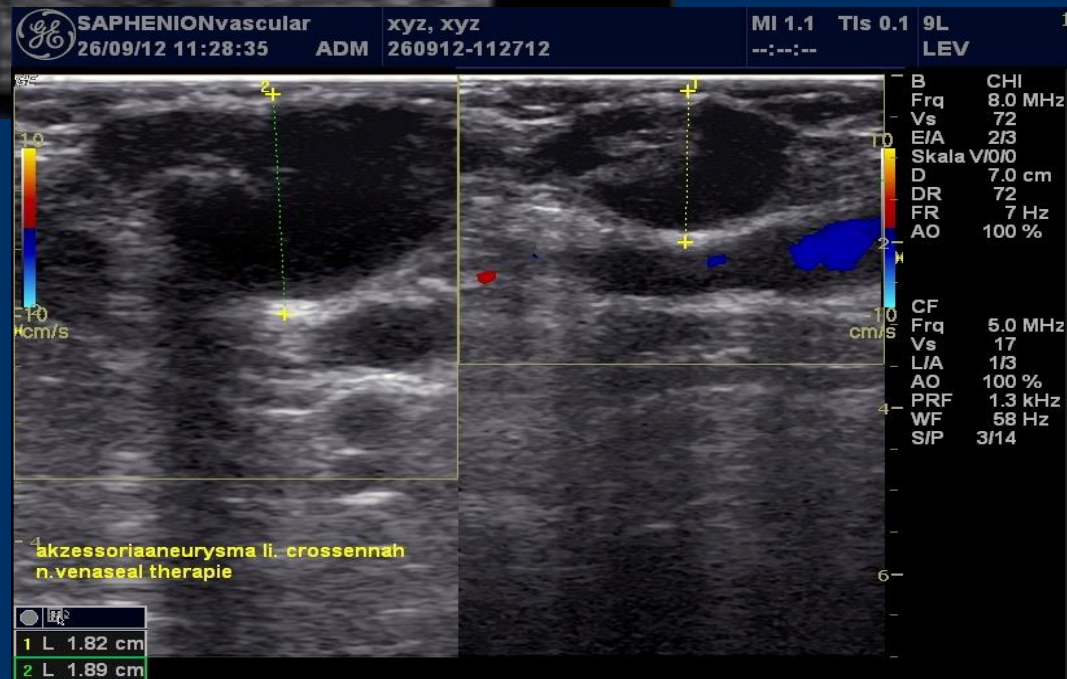
- ❑ Great saphenous vein in 619 cases, small saphenous vein in 267 cases
 - ❑ 128 patients had a single truncal vein treatment
 - ❑ 317 patients received treatment for two truncal veins
 - ❑ 36 cases we treated three truncal veins,
 - ❑ 4 patients had four truncal veins treated in a single session.

- ❑ No general anesthesia in any case . Most procedures were carried out under sedation (dormicum),19 patients remained without any sedation, one patient performed pain acupuncture on herself on point G4

- ❑ in 95% of all cases the patients left without compression stockings

- ❑ We recommend it for ectatic veins (over 1.2 cm in diameter) and aneurysms

VenaSeal™ - Closure System – our experience



VenaSeal™ Closure System – our experience

Duplex control follow up over approximately 36 months

- ❑ Post procedure all 886 veins were re-examined – 884 veins were sealed immediately = **99.8% closure rate**
- ❑ After 14 - 30 days we found nine partially and 3 completely recanalized veins = **98.7% closure rate**
- ❑ Three to four months post procedure we observed 12 partial and 4 complete recanalizations = **98.2% closure rate**
- ❑ After six to eight months we observed an additional 13 partial and 5 complete recanalizations = **97.7% closure rate**
- ❑ Further recanalizations were not observed until month 37 in this retrospective study.

Closure rate at 36 months: 97.7%

VenaSeal™ Closure System – our experience

- ❑ For the treatment of one truncal vein we use on average between 1.2 – 1.8 ml of glue.
- ❑ Side effects in 10 - 15% of all cases:
 - ❑ Unspecific inflammatory reaction of tissue in 13.9% (no phlebitis!)
 - ❑ Ecchymosis in 10%, especially in extra-anatomic subcutaneous truncal veins
 - ❑ Lymph fistula at the puncture site in only one case

We did not find:

Hypesthesia, paresthesia, permanent skin reaction, no phlebitis or thrombosis.

VenaSeal™ Closure System–Discussion

- ❑ Quality standards for endovenous therapy have been developed.
- ❑ Colleagues have secure quality criteria for trans-catheter treatment methods. VenaSeal™ closure is the newest development.
- ❑ In contrast to most other methods VenaSeal™ is performed without using thermal or mechanical energy.
- ❑ The side effects of laser or radiofrequency are not an issue, pain score compared to radiofrequency is significantly lower (1.6 / 3.4)
- ❑ We neither need general anesthesia or tumescence, nor do we need compression stockings.
- ❑ We can treat two or more truncal veins in one single session.

The closure rate of VenaSeal™ compared to endothermal is the same or better!



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After 13 years of working with endovenous techniques we say:

Think endovenously!

Our experience with endovenous therapy and especially with VenaSeal™ Closure System made it our basic therapy of truncal varicous veins.





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Thank You for Your attention.

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