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# SAPHENION® NEWS

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## VenaSeal - The Facts

### Sealing veins with cyanoacrylate adhesive

„Biological glue have been successfully used in medicine since 1960. Since 2011 also for the treatment of varicose veins.“

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We have noticed that, for some time now, colleagues - especially from Berlin - spread their opinion about the VenaSeal treatment on the internet, thereby causing considerable confusion among patients. Of course, all colleagues are entitled to have their personal opinion, even if it may not be supported by first hand experience or scientific facts. We have, however, been informed by our patients that massive uncertainty is being caused by such statements.

This is motivation enough for us to research facts about "vein glue" in scientific publications and also offer insight from more than 700 successful treatments. Our analysis rests primarily on the dissertation "Die Haftkraft verschiedener Dentinhaftvermittler auf kortikalem Schweineknöchel in vitro" by Dr. Katrin Bekes, which she defended in April 2003 at Martin-Luther-University in Halle/Saale.

#### Diverse areas of application for cyanoacrylate adhesive – approved for the arterial vascular system since 1981

Whenever adhesives are being used in surgery, they are in most cases cyanoacrylates. These were successfully synthesized as early as 1949, while their extreme adhesive strength was only discovered ten years later. In 1960 they were used as biological glue for the first time. Nowadays cyanoacrylates are used in manifold ways throughout all surgical disciplines, e.g.: as seam replacement for skin, blood vessels and nerves in urology, gynecology and otolaryngology.

Compared to sewn wounds glued ones are equally stable! Further fields of application are orthodontics and implantology, while cyanoacrylates have also been used for haemostasis and in order to treat damaged tissue. Since 1981 the adhesives have been used without any difficulties in neuroradiology in order to close up baggy dilations of arteries in the brain to prevent cerebral apoplexy.

#### **Tissue compatible and biodegradable**

Cyanoacrylate adhesive (histoacryl basis) is tissue compatible, non carcinogenic and biodegradable. Approximately 20 to 30 seconds after having been applied or inserted the adhesive synthesizes. After three to six months the such treated vein is not traceable anymore. Fractional traces of glue are the only traces left in the old course of the vein, visible due to shadows on the ultrasound. Every patient who has been examined by us after the treatment showed chemical data in a normal range.

There has only been one minor side effect in form of a temporary and unspecific inflammatory reaction, which was caused by the contact of lymph with the adhesive (due to the permeability of the vascular wall). Here a momentary increase of the inflammation parameters (c-reactive protein, lymphocytes) could be detected in the chemical checks in the laboratory. By applying cooling bandages this minor reaction can easily be regulated. Neither additional side effects nor complications have been described in decades of successful application, with especially the treatment of cerebral arteries with cryanoacrylate adhesive being entirely unproblematic. Also non of the aforementioned residues of glue in the vein have remained permanently in the body. A placenta-movement has not been detected.

#### **Indication is the treatment of the defect truncal varix**

The approval of the adhesive VenaSeal Closure for the therapy of veins has been granted Europe- wide in 2011. Also in the United Kingdom, Ireland and Norway the system is licensed with an approval in the USA being expected any time soon.

However, the adhesive is not suitable for the treatment of cosmetically objectionable side branch varices and spider veins as some colleagues have claimed. For this purpose "gold standard" - approved microfoam is available as adjunction. It is also untrue that extensive synthetical implants are being inserted. Only 1.5 to 2 ml of adhesive are needed per truncal varicose vein (varix), but by no means vast quantities of plastic. In any case the focus is on the functional repair of all defect truncal varices simultaneously in one sitting. Afterwards cosmetic aspects can be handled therapeutically. Keeping all that in mind the VenaSeal System is equally effective as the radio frequency system, but comes with considerably less side effects.

#### **Dauntingly high costs?**

Another persistent rumour claims our VenaSeal System costs €8.000. That is not only wrong, the claim is clearly aimed at deterring the patient. As doctors we are generally bound to a settlement according to our fee schedule, that also includes new therapies. Therefore the treatment of a truncal varix in both legs simultaneously will normally cost between €3.400 and €3.600, including the expense for the catheter of €1.499. The comparatively high cost of the catheter can be balanced with the VenaSeal treatment when used simultaneously on all affected truncal veins.

Patients, not only private ones, in Berlin as well as in Rostock were willing to come up with the expenses of new therapies as long as a transparent settlement or bill is being provided. Hence we see no need scaring off our patients. We are able to treat with various surgical and endovenous therapies and take the liberty to recommend the best option to our patients. Experience from hundreds of interventions proves us right.

**We at SAPHENION® are convinced: "think endovenous, think VenaSeal"**