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Venaseal Glue

These are general guidelines for your information and need not apply to specific cases.

About the treatment:

Varicose veins arise from problems with the valves in the superficial veins in the legs. These valves usually ensure that the blood can only go up (against gravity) back towards the heart. If you have varicose veins, these valves are not working (they are "incompetent") and so the blood is pushing back down toward the feet, blowing out the veins, and potentially causing symptoms in the feet/ankles/shins, such as aching and swelling, or even skin pigmentation, eczema or ulceration.

Historically the mainstay of treatment for varicose veins was to surgically "strip" one or both of the main superficial veins of the thigh (the long or short saphenous veins), to stop that pressure bearing down on the veins in the calf. This is a very effective operation, but does cause quite a lot of bruising and pain in the thigh where the vein is stripped, from bleeding from all the small branches of the vein.

Please note that you still have plenty of ways the blood can get out of your leg via the deep venous system, which is working normally (we will have demonstrated this with the ultrasound you have had, if you have been deemed to be suitable for glue treatment). Many patients ask whether destroying veins will cause a circulation problem. In fact, you *already have* the circulation problem, with blood constantly going *backwards* through the superficial system of veins. By removing this system, the blood is all forced to go *forwards* (ie up out of the leg, back to the heart) through the deep system, *improving* the circulation of blood out of the leg.

In the last few years, there have been a number of great leaps forward in the treatment of varicose veins. One of the most recent is Venaseal glue. This is a special catheter which is inserted into the vein below the knee via a small (~2mm) skin incision, and then all the way

to the groin, inside the vein. We then deposit 0.1ml drops of specially formulated cyanoacrylate glue every 3cm down the vein, to permanently seal the vein from the inside. The procedure takes approximately half an hour per leg. If needed, both legs can be treated in the same sitting.

The treatment works by immediately sealing off the incompetent vein, meaning that instead of the vein acting like a pipe, transmitting high pressures back to the foot, it becomes an almost invisible line of fibrous tissue. All the long-term data we have available indicates that this is a permanent result.

Before your procedure:

The glue works immediately to seal the vein, and so stockings are not necessary for the treatment to be successful. However, Dr Ward-Harvey will assess your legs as to whether you would still benefit from stockings. This would be dependent on the size of your varicose veins. If large, there is a concern that they can get inflamed and tender. This is much less likely with stockings. If you have been told you need stockings for the procedure, please ensure you bring your compression stocking(s) with you for the procedure (unless we have made prior arrangements to have them ready for you on the day).

In addition, there is a theoretical risk of problems with the glue in patients who are allergic to adhesives. Please alert Dr Ward-Harvey if you have an allergy to glue or adhesives.

The procedure:

Using local anaesthetic, Dr Ward-Harvey will insert the Venaseal catheter into your saphenous vein, usually via a 2-3mm incision below the knee. The catheter is then inserted to just below the groin (this is visualised by using ultrasound at the same time). Initially two droplets of glue are deposited at the top of the vein to ensure a good seal, and compressed for 3 minutes. Further drops are delivered every 3m down the vein, and compressed for 30 seconds each time.

It is very likely you will have further lumpy veins down your thigh or calf. The Venaseal glue treatment only addresses the large "feeding" vein which is responsible for engorging those veins. Usually, those varicose veins are immediately smaller due to reduced pressure. However it usually takes some months for them to disappear. Dr Ward-Harvey will wait for those veins to shrink as much as possible, then will inject the visible veins with some foam sclerotherapy. This is a technique which causes inflammation and occlusion of the veins after injecting the veins with a chemical (polidocanol) foamed up with air, into the veins themselves.

Afterwards:

For the first week after the treatment, please continue to have a normal active lifestyle. The worst thing you can do is become inactive after the treatment, as this will increase your likelihood of developing blood clots in the legs.

You should be able to return to work/normal activities any time.

If you have been given a stocking, it should be worn during the day for 2 weeks (feel free to remove it for bed and for showering, and for swimming). If you are having trouble with getting your stocking on, try using rubber washing-up gloves. Talcum powder can help with getting the stocking on. If your stocking is hurting you, please let us know.

Over the first few weeks following the treatment, you may notice a mildly tender firm "line" down the inner thigh (there may even be some pink inflammation of the skin overlying it). This is the treated vein which has become inflamed after the treatment. This occurs in up to 20% of patients, and can be treated with anti-inflammatories (such as ibuprofen) if necessary. It resolves after a few weeks. Wearing the stocking should help reduce the inflammation and pain.

If you develop a tender swollen calf, please let us or your GP know straight away, so that you can get an ultrasound scan to rule out Deep Vein Thrombosis.

If you have any concerns that your recovery is not proceeding as expected, please call the rooms and we can discuss what to do.

Complications:

Most patients cope extremely well with Venaseal and suffer few (if any) ill effects. Dr Ward-Harvey will discuss with you any specific details about your particular veins or risk factors which make you any more or less likely to have problems. The following complications are detailed for transparency so that you are aware that Venaseal is not immune from ill-effects, no matter who performs the procedure.

-Pain: The procedure is usually quite comfortable, apart from the needle for the local anaesthetic, and if the catheter catches on a vein valve. Pain in the first few days can be treated with anti-inflammatory tablets. Some patients notice a firm tender "cord" going down the inner thigh where the saphenous vein has been treated, or to some clot forming in some of the large varicose veins. This is due to the post-treatment inflammation, which is normal and settles after a few weeks. It is not dangerous and will not result in a deep vein thrombosis.

-Bleeding: There is only one small skin incision for this procedure, which will have a dressing applied at the end. If this bleeds, please apply pressure and elevate the leg.

-Pigmentation: The Venaseal treatment has a very low incidence of pigmentation (brown discolouration) along the vein, but if simultaneous injection sclerotherapy is performed, then the incidence of pigmentation is increased. For this reason, often we will recommend staged procedures.

-Infection: Rarely, patients can have a postoperative wound infection around the small wound created to insert the catheter. This may require antibiotics.

-**Residual veins**: The Venaseal procedure has a very high success rate of occluding the saphenous vein. However it may be that there are some residual visible veins left after the treatment. Often these will become less prominent over the next few months, now that they no longer have such high pressures in them, and nothing further may need to be done. If they remain an issue, Dr Ward-Harvey will discuss other options for treatment, which are highly likely to be simple injections of the veins.

-Nerve damage: Although theoretically possible, nerve damage has been reported in all the other ways to treat varicose veins, *apart from Venaseal*.

-Recurrent veins: Despite documented complete treatment of varicose veins, up to 20% of patients may experience recurrent varicose veins many years after the treatment. This is usually due to new venous pathways forming, and the valves in these veins not working. Fortunately, it is much less likely that recurrent veins are symptomatic, and if you require treatment, usually all that is required are some injections. Please let Dr Ward-Harvey know if you are concerned about recurrence, and this can be investigated and treated appropriately.

-Allergic Reactions: You may (very rarely) be allergic to the glue compound which is injected through the catheter. If you have an allergic reaction, this may range from mild (itchiness and hives), through to a serious medical emergency, and need medication or even hospitalisation, and a surgical operation.

-Deep Venous Thrombosis: This occurs in less than 1% of patients, and is largely prevented by wearing stockings and mobilising.

Airline Travel:

Although the risk of blood clots is minimal with Venaseal treatments, we do not advise patients to undertake long distance air travel within four weeks of treatment. Short flights may be acceptable, but if you have any doubts please discuss them with Dr Ward-Harvey.