



Clarivein

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 head of 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 Clarivein). 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 Clarivein. 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. Out from the end of the device, an angled blunt wire protrudes, which a motor causes to then rotate at 3000rpm, causing damage to only the innermost layer of the vein wall. At the same time, a small volume of an irritant solution (“sclerosant”) is injected, which adds to the damaging effect.

The treatment works by causing constriction and damage the inner layer of the vein wall, which then becomes inflamed and sticks to itself when there is external compression applied (using a stocking). After 24-48 hours, this vein sticks to itself permanently, 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.

Before your procedure:

Please ensure you bring your compression stocking(s), as you cannot have the procedure without them.

The procedure:

Using local anaesthetic, Dr Ward-Harvey will insert the Clarivein 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). The rotational wire will then be tested, which usually feels like an unusual gentle buzzing sensation in the groin, but should not be painful. The catheter will then be withdrawn very slowly to treat the entire length of the vein. Most patients either feel nothing or a mild buzzing sensation during this process. Occasionally the wire catches on a valve, resulting in a pulling sensation. If this occurs, Dr Ward-Harvey will be able to manipulate the catheter to release the valve and continue. Depending on the size of your remaining varicose veins, Dr Ward-Harvey may then inject some of the remaining veins with further foam sclerotherapy, or will choose to wait until a few months after the Clarivein procedure so that the veins shrink down and will need less or no further treatment. Your leg will then be placed in a full length stocking.

After the procedure, please go for a walk straight away (for 30 minutes) to keep the blood circulating.

Afterwards:

For the first week after the treatment, please take at least a thirty minute walk every day. When sitting, elevate the legs with the knees slightly bent. Try to avoid standing still for any

length of time. 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 the following day.

After 48 hours you should remove the stocking and can have a shower. After this the stocking should be worn during the day for at least a further 2 weeks (i.e. feel free to remove it for bed and for showering). 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.

The success of the treatment relies upon the pressure that the stocking applies to the treated area. Wear the stocking until the leg is completely comfortable on standing (may be up to 3-4 weeks).

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 is normal, and can be treated with anti-inflammatories (such as ibuprofen) if necessary. It resolves after a few weeks.

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 Clarivein 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 Clarivein 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. This is due to the post-treatment inflammation, which is normal and settles after a few weeks.

-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 Clarivein 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 Clarivein 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 Clarivein*.

-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 sclerosant 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.

-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 Clarivein 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.