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## DO VENOUS TREATMENTS FIT AESTHETIC PRACTICES?

Prof. Mark S. Whiteley discusses why adding vein-related treatments to a clinical practice might not be as simple as it sounds

Aesthetic medicine is a relatively new medical specialty that is pushing hard to identify the boundaries of acceptable practice. Venous surgery has a much older history with decades of research, development, audits, regulation and - of course - litigation.

For more than a decade and a half now, the aesthetics industry has seen phenomenal growth and prosperity. With increasing public awareness of and interest in aesthetics, improved accessibility through growing numbers of practitioners and practices, and a constant supply of new products and innovations coming into the marketplace, the future for the industry, as a whole, seems rosy.

However, as in all markets, to remain healthy there must be a balance between demand and supply. One of the problems with the aesthetics industry is that the 'entry' requirements to start practising aesthetics are fairly low and the rewards for doing so can be very high. As such, there has been an explosion in the numbers of providers of aesthetic services, whether individuals, practices or clinics.

Of course, this results in a very

competitive market, which leads clinics and practices to look for innovative procedures and services to increase their offering in order to grow their revenue and market share.

Generally, competition can be a good thing, provided that competition is based upon excellence of service and results, and prices are kept to a reasonable and affordable level.

As with all competitive markets, sometimes those pushing hardest, end up pushing too far, resulting in both medical and hence legal problems that rebound as bad publicity for the sector, litigation and calls for extra regulation.

I believe that there is a great risk that we might see this in the very near future in aesthetic clinics starting to offer venous services for leg veins, mistakenly considering them to be an aesthetic condition which can be treated in the same manner as other aesthetic conditions.

I am not against anyone treating veins and venous conditions – indeed I run courses, have published multiple training videos online, written books<sup>1-3</sup> and many peer-reviewed papers to

show others how to improve their knowledge and treatments of venous conditions – but I have grave concerns about some of the practices that I am starting to see emerge. In particular, I am worried when I hear managers and owners of Aesthetics Clinics saying that *"NICE has said that Varicose Veins are aesthetic"* and that, *"NICE say that veins can now be done in aesthetic clinics"*, when the actual NICE Clinical Guidelines (NICE CG 168 July 2013<sup>4</sup>) say nothing of the sort!

Therefore, this article should be read by anyone who is either considering bringing veins into their clinics or practice or who has already done so, so that they can be sure that they have fully understood the responsibilities they have taken on from moving their practice from aesthetic 'clients' to venous 'patients'.

### Differences between aesthetics and venous practices (see Table 1)

There are many attractions to starting an aesthetic practice. Of course, it is nice to help people to feel good about themselves, but most people don't go

	Aesthetics Practice	Leg Vein Practice
Attendees	Clients wanting a service	Patients with a systemic medical disorder
Assessment	Visual	Duplex Ultrasound as a minimum
Area to be treated	Local to the "problem area"	Usually remote from the visible "problem area"
Success or failure	Happy patient/ photos	Abolition of reflux/visual improvement/patient satisfaction/quality of life scoring/venous symptom scoring – <b>Now College of Phlebology Registry</b>
Out of hours cover	Rarely organised nor needed	An out of hours cover arrangement is required with the ability to scan and treat DVT, post-op bleeds etc.
Complications	Rarely serious virtually never life-threatening	Not common but often serious particularly if left - and some potentially life-threatening
Profit margin	<b>Very good</b> – good prices, clients value procedures, single practitioners, quick treatments, simple clinical rooms, cash payments	<b>Surprisingly low</b> – competition for prices, patients still expect NHS treatment and resent paying, multidisciplinary team, long treatments, CQC approved treatment rooms or theatres, often private medical insurance companies involved

into aesthetics for charitable reasons. Most go into aesthetics to earn some money in something that they enjoy or feel that they are good at.

It is a useful exercise to consider a list of factors that makes aesthetics attractive and to compare each with a leg vein practice.

## The people wanting treatment: aesthetic 'clients' vs venous 'patients'

People presenting to aesthetics clinics are usually well. Even if they are not, the aesthetic condition that they are presenting with is not usually a medical condition. They are asking for a service and hence are clients. The most frequent medical condition for aesthetic practitioners to be aware of is Body Dysmorphia.

This is in stark contrast to people presenting with leg veins. Research has shown that 89% of women presenting with leg telangiectasia (thread veins) have reflux in local reticular or 'feeding veins', 40% have underlying truncal reflux and 15% have underlying incompetent perforating veins.<sup>5,6</sup> Failure to identify these before treatment will at best lead to sub-optimal treatment and at worst, lead to a worsening of the condition and potential claims. With

recent research showing the prevalence of pelvic venous reflux causing leg varicose veins, the investigation of varicose veins and venous conditions of the legs has become even more specialised.<sup>7,8</sup>

Moreover, patients with varicose veins have been shown to have a generalised dilatation of their blood vessels, with increased diameter of their coronary arteries.<sup>9</sup>

## The assessment of the problem to be treated

Aesthetic conditions are predominantly assessed visually. These may be colour variations in the skin, laxity in the skin, texture variations, wrinkles, unwanted hair or unwanted contours that need to be redefined. There is rarely a need to perform any investigations.

It is impossible to assess leg veins without a venous duplex ultrasound scan, performed by someone specialist in the examination. Although some doctors buy their own and use them in their own clinics, the real training to become a competent vascular technologist is a 3-year course leading to a qualification called the SVT (RVT in the USA).

Research presented in the Veith conference in New York in 2013 showed that doctors performing their own scan missed at least 30% of the

underlying causes of leg vein problems. Furthermore, the NICE Guidelines clearly state that varicose veins should be assessed by a 'vascular service' which is defined as "A team of healthcare professionals who have the skills to undertake a full clinical and duplex ultrasound assessment and provide a full range of treatment"<sup>4</sup> – not a single doctor doing their own scans and offering whatever is their preferred treatment.

## The area to be treated

Almost all aesthetic treatments are aimed directly at, or near to, the area identified by the patient as the problem. They can point to wrinkles, flaws, contours, sagging skin etcetera and the treatment is usually directed to that area without much thought of underlying problems.

Conversely, in venous disease, the treatment required for good medical treatment of a condition is rarely at the point identified as the problem by the patient. A patch of thread veins in the lower leg frequently has refluxing blood feeding into it from a network of reticular or deeper feeding veins, truncal veins such as the great saphenous, anterior accessory or small saphenous veins, pelvic veins in women children or incompetent perforating veins. Although we know that 16% of women with leg varicose vein have the source coming from pelvic veins<sup>7</sup>, it is only recently that our research has

shown that this is also the case in 3% of men.<sup>10</sup>

All these conditions can cause leg thread veins. However, these underlying causes are remote from the actual thread veins themselves. As discussed above, a further problem is that, with the exception of some reticular veins (green veins that do not bulge), none of them can be seen by the naked eye without a venous duplex ultrasound scan.

## The treatments themselves

Medical aesthetic treatments vary widely from surface-based chemicals, heat or energy radiation (such as laser or radiofrequency), injectables, implants and other minimally invasive techniques. However, as a general rule, most provide a temporary improvement which may last weeks, months and occasionally years, but few are permanent. Very few aesthetic treatments aim to permanently ablate tissue with the aim of fibrosis and scarring. This has great advantages when it comes to discussing complications and risks (discussed below).

Treatments for varicose veins have now been embodied by NICE as:

- Endothermal ablation (they meant "endovenous thermal ablation") such as endovenous laser or radiofrequency ablation
- Ultrasound-guided foam sclerotherapy if endothermal ablation is not available or suitable
- Open surgery 'stripping' if ultrasound-guided foam sclerotherapy is not available or suitable

These are the main treatments of the most basic surgeon treating varicose veins. All of them are invasive and destroy tissue – hopefully vein! As part of that destruction process, they will cause inflammation, bruising and thrombophlebitis in surrounding veins. If anything goes wrong with these treatments, the damage is permanent and if a clot is formed that extends into a deep vein, a deep vein thrombosis with possible pulmonary embolism is not only a serious condition but can be life-threatening.

The first two treatments, being minimally invasive, have stimulated the interest of aesthetic clinics as they can be performed in local anaesthetic minor-surgical theatres or clinic rooms. However, both involve introducing devices or gas bubbles into the venous circulation which if not controlled precisely, can embolise to the right side of the heart and lungs.

Those tempted to start doing these techniques should remember that 1 in 4 people have a patent foramen ovale (PFO) chanting blood from the right heart to the left heart. This is the route that gas bubbles from foam sclerotherapy can take to reach the brain causing transient ischaemic attacks and in the worst cases, strokes.

Although not in the NICE guidelines, research has clearly shown 40% of patients with varicose veins have incompetent perforating veins,<sup>11</sup> and it is becoming clearer that the treatment of incompetent perforating veins is needed as part of the treatment of leg varicose veins<sup>12</sup> and probably thread veins. In addition, as noted above, research has also shown that 1 in 6 women<sup>7</sup> and 1 in 30 men<sup>10</sup> who have leg varicose veins have got pelvic vein reflux as the underlying cause of their venous problem.

Therefore, if you are going to treat varicose veins properly, there is also a requirement to be able to treat incompetent perforating veins using a technique such as trans-occlusion of perforators (TRLOP)<sup>13</sup> and incompetent pelvic veins such as transjugular pelvic vein embolisation.<sup>14</sup>

## The assessment of success or failure

In aesthetics, success or failure is largely determined by whether the patient is happy or not. This can be enhanced by before and after photographs.

Venous conferences, on the other hand, have spent years debating the correct outcome measures for successful venous surgery. Many would argue the abolition of venous reflux would be a success. Others would argue that it is the disappearance of the problem the patient is complaining of. Others would point to patient satisfaction and a great many would

point to quality-of-life improvements. A popular addition to this is the venous symptom scoring systems.

Of course, none of these are sufficient by themselves. Perfect treatment of venous reflux does not mean a happy patient. Disappearance of thread veins or varicose veins in the short term might give a temporary success, but if problems return with a vengeance or even other problems occur due to the lack of treatment of underlying venous problems, a happy patient soon converts to one seeking compensation. Patient satisfaction is notoriously difficult in venous disease by being very nice to patients and telling them how lucky they are to have new techniques.

However, if their veins return or they find the technique used is not optimal, they may not be so satisfied in the medium to long term. Finally, quality-of-life measurements and venous symptoms scoring systems fail to include technical success.

It is for this reason that The College of Phlebology, based in the UK, is launching the CoP Venous Registry<sup>15</sup> in Autumn 2019.

Whereas aesthetic patients rarely start legal proceedings, venous surgery is considered part of medicine and when things do not go to the patient's satisfaction, or when the consenting process has been suboptimal, litigation is a real possibility. Indeed, venous surgery contributes a significant proportion of the medico-legal claims each year in the UK.

Therefore, careful patient follow-up with accurate note keeping and tests, assessments of results and clinical auditing is required. The submission of cases to the CoP Venous Registry adds a further layer of protection as it ensures that procedure numbers and results remain within acceptable boundaries.<sup>15</sup>

## The out of hours cover arrangements

Very few aesthetic clinics have an emergency rota. Practitioners that do give their mobile phones out do not expect many, if any, emergency calls.

Venous patients regularly get post-operative venous bleeds, leg pains or

wound infections. One of the things that annoys patients more than anything is being unable to contact a clinic when they are bleeding from a leg that has been operated on or are worried that they might have a deep vein thrombosis. Indeed, failure to respond to such a call and a subsequent diagnosis of a true DVT can be disastrous for a clinic. As such, provision for out of hours cover arrangements needs to be made and of course, this is part of the regulation by the Care Quality Commission (CQC).

## Complications

Complications of aesthetic treatments are rarely serious and are virtually never permanent or life-threatening.

As the veins of the legs are part of the circulatory system, complications are more common and must be both expected and planned for. These may be immediate such as anaphylaxis to sclerosant, disturbed vision or migraine following foam sclerotherapy or loss of part of an endovenous device into the venous circulation.

Complications often occurring soon after departing from the clinic include bleeding from puncture wounds of phlebectomy sites and painful legs due to compression or suspected DVT. Complications that occur after a longer time period include wound infections, lymphatic leaks or collections, superficial thrombophlebitis and DVT, in addition to chemical ulceration following sclerotherapy.

Those who do not have a background in venous surgery will be surprised at the workload generated by either complications or the fear of complications.

## Profit margins

Patients value aesthetic treatments highly and so are willing to pay well for most treatments. Many of these are performed quickly by a single practitioner in a simple clinical room, generating healthy profit margins for aesthetic businesses.

Conversely, with venous procedures, despite the high costs of the procedures to the patient or insurance company, most professionals coming from an aesthetic background

are shocked at the very low profit margins yielded at the end of the day. Competition in the venous world, coupled with virtually no increase in private fees from private medical insurance companies, has resulted in relatively low prices for venous procedures. Many clinics reduce prices by cutting quality in terms of equipment used, staffing or emergency cover arrangements. In the long term, all of these may turn out to be false economies in terms of litigation or reputation.

Most venous treatments take considerable time compared to aesthetic treatments and, as noted in the NICE definition of a 'vascular service', require a team rather than a single practitioner. Unless it is only simple sclerotherapy that is being performed (after a venous duplex ultrasound scan has excluded underlying venous reflux), most other venous procedures require a proper CQC approved treatment room or minor operations theatre.

Furthermore, when costing venous procedures, emergency cover and emergency consultations, tests and procedures must be added into the cost base. Finally, many patients with venous disease wish to use private medical insurance which requires negotiation and acceptance of service by these companies.

Thus, although the headline prices charged for venous surgery look attractive, the profit margins are surprisingly small when compared with the usual profit margins expected by aesthetic clinics.

## NICE clinical guidelines (CG168) for varicose veins

If having considered the above, and recognising the requirement for CQC approval, you still wish to set up a varicose veins clinic, then you must be aware of the NICE Clinical Guidelines for Varicose Veins (CG168).

Rather surprisingly, although people seem to think that these guidelines give some approval for varicose veins to be treated in aesthetic clinics, the guidelines themselves do not cover telangiectasia (thread veins or spider

veins) – called C1 in the CEAP system – nor simple varicose veins without symptoms, C2A in the CEAP system.

The CEAP classification system for venous diseases defines the **C**linical classification, **E**tiological classification, **A**natomical classification and **P**athophysiologic classification.

Of course, as telangiectasia (thread veins) and apparently simple varicose veins appear to be the commonest presentation of venous disease in the legs, the absence of NICE guidelines means that doctors and nurses must be able to prove to their professional bodies, if questioned, that they are acting within their professional competence to treat these veins. In addition, insurance or professional indemnity must be in place for practitioners taking on such work.

Although these are not covered by the NICE guidelines, it is clear from the references given above that any practitioner will need venous duplex ultrasonography to check for any underlying venous reflux before any treatment is recommended or undertaken.

NICE guidelines cover symptomatic varicose veins (C2S), venous oedema (C3), venous skin damage (C4), healed venous ulcers (C5) and active venous ulcers (C6). The guidelines are very clear that any of these conditions should be referred to a 'vascular service' which has a multidisciplinary team with the ability to diagnose the problem using venous duplex ultrasonography and any other additional tests that are required and can perform any of the required treatments.

The recommended treatments of endovenous thermoablation followed by ultrasound-guided foam sclerotherapy and stripping only if these two are not available or possible has been noted above.

Nowhere in these guidelines is there any reference made to veins being treated in aesthetic clinics or indeed not been treated in aesthetic clinics – only that anywhere that does treat them must qualify as a 'vascular service' as defined in the guidelines.

The world of venous surgery is moving on at a great pace. This year alone I have performed the first endovenous microwave ablation of varicose veins in

Europe and introduced high intensity focused ultrasound (HIFU) – also called Echotherapy or Sono vein into the UK. Currently, Echotherapy (Sono vein) using HIFU is only available at The Whiteley Clinic in the whole of the world.<sup>16</sup>

This new technique is completely non-invasive, using ultrasound from outside of the body to ablate veins a few centimetres below the skin. No operating theatre is needed and so, in time, it will be tempting to introduce these Echotherapy machines into ambulatory clinics – and even aesthetic clinics. However, the risk of damage is profound if used by professionals who are not used to venous ultrasound and venous anatomy. However, with the aid of artificial intelligence, and with adequate training and protocols, it will be interesting to see whether a semi-automated HIFU system to treat varicose veins might become commonplace in aesthetic clinics of the future.

## Conclusion

Some aesthetic clinics have been looking towards treating leg thread veins and varicose veins as part of their offering. However, leg thread veins and varicose veins cannot be assessed visually and are part of a systemic medical condition affecting the whole of the circulatory system. Aesthetic clinics wishing to set up such services need to be able to understand the difference between aesthetic clients and venous patients and be sure that they are compliant as 'vascular services' as defined by NICE CG168.

As a medical condition, CQC registration is required for any treatment over and above simple micro-sclerotherapy. Doctors and nurses need to be sure that they are acting within their professional competency and that their patients are in a safe environment for the procedures being undertaken. Insurance and professional indemnity must be in place.

In view of the potentially serious nature of possible complications when dealing with venous patients and treatments, adequate provision for out of hours emergency care must be made.

The treatment of venous disease is a fascinating area and the subject of huge amounts of research being performed worldwide. Starting a venous practice can lead to a very satisfying professional life but should not be taken on as a purely commercial project by those who will not put the time and effort into providing excellent care for patients with this circulatory disorder. However, new developments such as Echotherapy Sono vein using HIFU might well develop into systems that can be used to treat varicose veins in aesthetic clinics of the future.

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