



## Résumés d'articles publiés dans la revue « Phlebology » Volume 25 ; Number 1 : February 2010

### A-Z Series article

#### The role of perforators in chronic venous insufficiency.

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#### Abstract:

**Thesis:** Venous ulcers (VU) consume considerable resources in healthcare systems, up to 1% of healthcare budgets in industrialized countries. Best practice guidelines (GLs) incorporate evidence-based diagnostic and therapeutic recommendations in a cost-effective manner and have been associated with improved and less costly outcomes for many diseases.

**Objectives:** To determine whether there are common elements in GLs for VU and their evidentiary strength.

**Methods:** A systematic analysis of GLs for VU that were identified through [clinicaltrials.gov](http://clinicaltrials.gov), a government-sponsored website, and from experts outside the USA.

**Results:** Ten of 12 GLs on VU (7 North America and 5 Europe) were evidence-based, with the majority using the GRADE method. Only two had been developed or updated within the last three years. Venous duplex and ankle ABIs were recommended in all. Debridement was suggested in two, while simple non-adherent wound dressings were favoured in nine, and hydrocolloid in two. Only one GL discussed a range of dressing options, dependent on the condition of the VU. High pressure multi-layer compression bandages were favoured in 10. Only two focused on the importance of improving ankle joint mobility.

**Conclusions:** While there are numerous evidence-based GLs for VU, the majority may lag recent developments in the field. There is consensus on the elements for dressings and compression among the various GLs, which should facilitate the development of a common consensus GL, similar to that for DVT/PE. To improve patient care and reduce wasted resources, it is imperative for specialty societies to develop this consensus document.

#### Keywords:

chronic venous insufficiency, incompetent perforating veins, treatment.

### Review Article

#### Shedding light: laser physics and mechanism of action.

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#### Abstract:

Lasers have affected health care in many ways. Clinical applications have been found in a number of medical and surgical specialities. In particular, applications of laser technology in phlebology has made it essential for vein physicians to obtain a fundamental knowledge of laser physics, laser operation and also to be well versed in laser safety procedures. This article reviews recommended text books and current literature to detail the basics of laser physics and its application to venous disease. Laser safety and laser side effects are also discussed.

#### Keywords:

stimulated emission, monochromatic, coherent, collimated, photothermal, chromophore, fluence, endovenous laser ablation.

Original Article

Seasonal variations in the onset and healing rates of venous leg ulcers.

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Abstract:

**Objectives:** As many vascular pathologies exhibit circannual fluctuation, the aim of this study was to assess the chronobiological features of venous ulcers.

**Methods:** Based on a retrospective survey of the case histories of 391 venous ulcer patients, the rates of ulcer onset and healing in each month were analysed statistically; a time series was constructed to evaluate the seasonality.

**Results:** There was a significantly higher frequency of ulcer onset during the warmer part of the year (April-October), and onset showed strong seasonality. Healing rates were also unequally and statistically significantly distributed throughout the year: ulcers that appeared or that were treated with specialized treatment in the winter or summer healed slower in comparison to ulcers that began in the spring or autumn.

**Conclusions:** Venous ulcers exhibit circannual fluctuations in their onset and healing rates. Hypothetically, in addition to exacerbation of chronic venous insufficiency, seasonal variations in immune system activity might potentially be responsible for this phenomenon.

Keywords:

leg ulcer, seasonal variations, venous insufficiency, wound healing.

Original Article

Klippel-Trénaunay syndrome associated with great saphenous vein aplasia.

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Abstract:

Klippel-Trénaunay syndrome (KTS) is a rare, sporadic, congenital vascular disease of unknown aetiology. KTS could be associated with inflection of other regions. An association with great saphenous vein aplasia has never been described.

Keywords:

Klippel-Trenaunay syndrome, venous malformation, varicose veins, surgery.

Original Article

Endovenous treatments for varicose veins – over-taking or over-rated?

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Abstract:

**Objectives:** A variety of endovenous therapies for the treatment of superficial venous incompetence are currently available. The aim of this study was to evaluate the prevalence of endovenous techniques used by consultant vascular surgeons in the United Kingdom.

**Methods:** An anonymous online survey of 16 multiple choice questions relating to the nature and provision of treatment for varicose veins was devised. Consultant members of the Vascular Society of Great Britain and Ireland were invited to participate by email.

**Results:** A total of 108/352 (31%) surgeons completed the survey. The majority offered surgery as the first-line treatment for primary great saphenous vein (GSV) and small saphenous vein (SSV) incompetence (69% and 74%, respectively). Endovenous procedures were offered as first-line treatment by 32/108 (29.6%) for GSV reflux, 36/51 (70.6%) surgeons performed these under local anaesthetic and 21/51 (41.2%) were performed as an outpatient procedure. The most important factor influencing treatment decisions was considered to be patient preference by 77/108 (71.3%) surgeons, although 48/61 (78.7%) respondents were restricted by primary care trusts with regard to endovenous treatments, and 33/108 (30.6%) offered different treatments to private patients.

**Conclusion:** Traditional surgery remains the most commonly offered treatment for patients with varicose veins. The provision of endovenous therapies varies greatly, and there are significant differences in local availability regarding these treatments.

Keywords:

varicose veins, endovenous ablation, traditional surgery, survey.



## Résumés d'articles publiés dans la revue « Phlebology » Volume 25 ; Number 2 : April 2010

### A-Z Series article

#### The treatment of varicose veins: an investigation of patient preferences and expectations.

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**Abstract:** **Objectives:** A number of modalities are now available for the treatment of varicose veins. The aim of the study was to investigate the factors considered important by patients when contemplating treatment of their varicose veins.

**Methods:** Consecutive new patients referred to a vascular surgery service were invited to complete a short anonymous questionnaire prior to their consultation. The questionnaire consisted of 13 multiple choice questions relating to symptoms, potential varicose vein treatments and patient knowledge of existing therapies.

**Results:** Of 111 patients, there were 83 complete responses (75%). Symptoms of pain or aching were reported as moderate or severe by 77/103 (75%) of patients and significantly limited the activities of 47/101 (47%). Although the majority (89/103 [86%]) of patients were aware of surgery, only 52/103 (51%) knew of the existence of endothermal ablation (either laser or radiofrequency) and only 23/103 (22%) were aware of foam sclerotherapy. Some 58/92 (63%) were in favour of local anaesthetic treatment. Most patients (74/103, 72%) felt inadequately informed to express a preference regarding treatment type prior to their consultation, although 24/103 (23%) expressed a preference for endovenous treatment. Interestingly, 74/92 (80%) stated that the opinion of their vascular surgeon would be likely to or definitely influence their treatment decision and the majority of patients stated that what they had read in magazines (54/80, 64%) or on the Internet (51/85, 60%) would have no influence on their decision regarding treatment, respectively.

**Conclusion:** Only a minority of patients referred with varicose veins were aware of endovenous treatments or felt adequately informed to express a treatment preference prior to consultation. Over half of patients expressed a preference for local anaesthetic therapy and a preference for a single visit treatment, although most would be strongly influenced by the opinion of their vascular surgeon and not influenced by media advertising.

**Keywords:** patient perspective, varicose veins, endovenous ablation, questionnaire study.

### Original article

#### Calcium dobesilate and oxerutin: effectiveness of combination therapy.

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**Abstract:** **Objectives:** Chronic venous insufficiency (CVI) is an important cause of discomfort and inability to work. Hydroxyethylrutosides (Venoruton®; o-[beta-hydroxyethyl]-rutosides) has been used for decades for the treatment of CVI. Studies have reported symptomatic relief and a decreased capillary filtration after the administration of the oral preparations. Calcium dobesilate is a synthetic venoactive drug acting on several levels. It inhibits capillary permeability; it has antioxidant properties; and it inhibits the synthesis of prostaglandins and thromboxanes, reducing platelet and erythrocyte aggregation, as well as blood viscosity. The aim of this study is to determine whether the combination of both drugs is more effective in decreasing patients' complaints.

**Methods:** One hundred and fifty patients with primary venous insufficiency were randomized into three groups: Group A receiving calcium dobesilate only, Group B receiving oxerutin only and Group C receiving both calcium dobesilate and oxerutin. Patients were evaluated with a questionnaire before and four weeks after treatment regarding following parameters: itching, fatigue, heaviness, numbness, cramp, swelling and sensitiveness. Patients rated their symptoms from 0 to 4 (0: absent; 1: mild; 2: moderate; 3: severe; 4: very severe).

**Results:** Complaints, which were scored by patients before and after treatment, decreased. Among the single-drug groups, itching score decreased more in Group B, whereas scores of fatigue, heaviness, numbness, cramp and swelling decreased more in Group A. But the difference was not significant, statistically. But all complaints decreased significantly in Group C. Difference of scores after treatment revealed no statistical significance in Group A and B, but scores of Group C produced a significant difference when compared with Group A and B.

**Conclusion:** Results demonstrate that a combination of calcium dobesilate and oxerutin shows a better improvement of complaints. These observations have to be confirmed in larger series with objective tests. Changes of quality of life after a combination therapy might also be of interest.

**Keywords:** venous insufficiency, calcium dobesilate, oxerutin, combination therapy.

Original article

**Current prescribing patterns of elastic compression stockings  
post-deep venous thrombosis.**

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**Abstract:** **Objectives:** Post-thrombotic syndrome (PTS) is a complication of deep vein thrombosis (DVT) characterized by chronic pain, swelling and heaviness, and may result in ulceration. Elastic compression stockings (ECS) worn daily after DVT appear to reduce the incidence and severity of PTS. The aims of our study were to investigate practices and perceptions of DVT patients and physicians regarding the use of ECS after DVT.  
**Methods:** Two surveys were conducted. The first was sent to 225 staff and trainee clinicians and the second was administered to 150 DVT patients.  
**Results:** The results demonstrated that the majority of senior staff (75%) believed that ECS were effective in preventing PTS and in managing venous symptoms. However, this was in contrast with junior trainees (21%) ( $P < 0.05$ ). This resulted in only 63% of patients being prescribed ECS post-DVT. There was a lack of consensus as regards the optimal timing of initiation of ECS, duration of therapy and compression strength. Nearly all DVT patients who were prescribed ECS purchased them, 74% wore them daily, and most (61%) reported that ECS relieved swelling and symptoms. Physicians correctly predicted the main reasons for non-compliance, but misjudged the scale of patient compliance with ECS.  
**Conclusions:** Our findings suggest that there is a lack of consensus among doctors regarding ECS use after DVT and widespread education regarding the latest evidence of the benefit of ECS after DVT.  
**Keywords:** deep venous thrombosis, post-thrombotic syndrome, elastic compression stockings.

Original article

**One-year outcomes of radiofrequency ablation  
of incompetent perforator veins using the radiofrequency stylet device.**

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**Abstract:** **Objectives:** Early success treating incompetent perforator veins (IPVs) with radiofrequency ablation (RFA) and the trend to move varicose vein surgery into a walk-in walk-out service led to the design of a specific device enabling RFA of IPVs using local anaesthesia (ClosureRFSTM stylet). Our aim was to assess one-year outcomes of a clinical series of patients undergoing treatment with this device. Truncal reflux, where present, was treated initially, and RFA of IPVs was performed as a secondary procedure.  
**Method:** Duplex ultrasound examinations were performed and the presence of IPVs documented. Results were compared with preoperative scans. IPVs were classified as closed, not closed/reopened or de novo.  
**Results:** Of the 75 patients invited for follow-up, 53 attended at a median time of 14 months (range 11-25). Sixty-seven limbs were analysed (M: F 1: 2.1, median age 62, range 25-81). Of the 124 treated IPVs, 101 were closed (82%). Clinical, aetiological, anatomical and pathological clinical score was improved in 49.3% limbs. IPV closure was reduced in patients with recurrent varicose veins compared with primary varicose veins (72.3% versus 87%,  $P = 0.056$ ).  
**Conclusion:** These results demonstrate the radiofrequency stylet device to be an effective treatment for IPVs.  
**Keywords:** incompetent perforator vein, radiofrequency ablation, varicose veins, venous insufficiency.

### Original article

## The use of prophylaxis in patients undergoing diagnostic tests for suspected venous thromboembolism.

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**Abstract:** **Objectives:** The purpose of this study was to describe the use of pharmacological and mechanical prophylaxis and clinical outcomes of patients undergoing diagnostic tests for suspected venous thromboembolism (VTE).

**Methods:** The medical records of 660 consecutive inpatients referred for suspected VTE at an academic medical centre were retrospectively reviewed.

**Results:** Acute VTE was diagnosed in 138 (21%) of the 660 patients; the incidence of deep vein thrombosis and pulmonary embolism was 18-25%, respectively. Only 61% of eligible patients received pharmacological prophylaxis and 43% of patients received mechanical prophylaxis. The incidence of VTE was higher in patients who did not receive pharmacological prophylaxis (30%) compared with patients who did (16%, P value < 0.001).

**Conclusions:** Preventive measures for VTE, including both pharmacological and mechanical prophylaxis, were underutilized in hospitalized patients undergoing diagnostic tests for suspected VTE.

**Keywords:** prophylaxis, venous thromboembolism.

### Original article

## Use of durometry in assessment of venous disease.

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**Abstract:** **Objectives:** Ulceration of the lower limbs is a common debilitating complication of chronic venous hypertension. Detection of preulcerative skin changes would allow for identification of high-risk patients; early active treatment may prevent ulcer formation.

**Methods:** Patients with isolated venous disease and volunteers attending outpatient clinics underwent assessment of their clinical, aetiological, anatomical and pathological (CEAP) classification. We employed an industrial durometer, an instrument that measures the hardness of metals and plastic, to assess skin induration. The durometer probe was rested perpendicular on their skin 15 cm above the medial malleolus in non-ulcerated tissue, with the patient and limb in recumbency. The average of four measurements was derived.

**Results:** In 107 people, 203 lower limbs (mean age 55.6 years) were assessed. A significant difference in durometry readings was demonstrated between patients with CEAP classes 0, 1 and 2, and those with classes 4, 5 and 6 (P < 0.0005). There was statistically significant evidence that age and CEAP classification correlated with durometry (P < 0.0001).

**Conclusion:** Durometry is of potential value in the assessment and monitoring of preulcerative venous disease, and could help to identify high-risk patients. This would assist in the institution of timely and appropriate treatment.

**Keywords:** durometry, venous disease.

### Short report

## Renal transplantation after excision of the inferior vena cava for residual renal cell carcinoma.

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**Abstract:** A rare case is reported of a 47-year-old patient who had residual tumour left in the stump of his left renal vein and inferior vena cava (IVC) after a left nephrectomy for renal cell carcinoma, having previously had a right nephrectomy for a non-malignant disease. He underwent delayed excision of the residual renal tumour after seven months with a prosthetic graft replacement of the IVC. Five years later he developed a graft infection caused by a graft-enteric duodenal fistula. The infected graft was excised and the duodenum closed. The patient has subsequently undergone a successful renal transplantation despite a lack of major venous outflow and remains alive and well eight years after initial removal of the tumour from the IVC.

**Keywords:** inferior vena cava, reconstruction, prosthetic graft, nephrectomy.

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## Sclérothérapie: l'art et la science du phlébologue au service des patients!

À l'occasion de ce numéro de rentrée 2010, Phlébonews a rencontré Serge Mako qui a souhaité nous parler des engagements de Kreussler Pharma aux côtés de la SFP dans la maîtrise des techniques de sclérothérapie.

L'occasion était venue d'aborder également des sujets tout aussi relatifs à l'apprentissage qu'à l'exercice de la phlébologie:

- l'information faite aux médecins généralistes et aux patients sur la maladie veineuse, (Voir le document sur la CEAP à l'usage des professionnels ci-contre).
- La mousse, sa standardisation et sa validation,
- Le retour du Trombovar (pour 2011?).



Serge Mako - Directeur Général  
Co-gérant de Kreussler Pharma

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