



## Résumés d'articles publiés dans la revue « Phlebology » Volume 27 ; Number 5 : August 2012

### Review article

#### Multiple sclerosis: a chronic infective cerebrospinal venulitis?

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#### Abstract:

The aetiology proposed for the development of chronic cerebrospinal venous insufficiency (CCSVI) associated with multiple sclerosis (MS) has been the presence of congenital truncular venous malformations. However, this hypothesis is not consistent with the epidemiology or geographical incidence of MS and is not consistent with many of the ultrasonographic or radiographical findings of the venous disturbances found in MS patients. However, the probability of a venous aetiology of MS remains strong based on evidence accumulated from the time the disorder was first described. The method used in this review was to search PubMed for all past medical publications related to vascular, venous, haematological, epidemiological, biochemical, and genetic investigations and treatments of MS. Epidemiological and geographical findings of prevalence of MS indicate the involvement of an infective agent. This review of the venous pathology associated with MS describes a hypothesis that the pathogenesis of the venous disease could be initiated by a respiratory infective agent such as Chlamydomyces pneumonia, which causes a specific chronic persistent venulitis affecting the cerebrospinal venous system. Secondary spread of the agent would initially be via the lymphatic system to specifically involve the azygos, internal jugular and vertebral veins. The hypothesis proposes mechanisms by which an infective venous vasculitis could result in the specific neural damage, metabolic, immunological and vascular effects observed in MS. The hypothesis described is consistent with many of the known facts of MS pathogenesis and therefore provides a framework for further research into a venous aetiology for the disease.

If MS does result from a chronic infective venulitis rather than a syndrome involving congenital truncular venous malformations, then additional therapies to the currently used angioplasties will be required to optimize results.

#### Keywords:

multiple sclerosis, infective agent, venulitis, chlamydomyces.

Phlebology August 2012;27:207-18. Published ahead of print 12 January 2012. DOI:10.1258/phleb.2011.011068

### Review article

#### Anatomy of the foot venous pump: physiology and influence on chronic venous disease

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#### Abstract:

The aim of this paper is to demonstrate the location of the venous foot pump using an anatomical study. Four hundred cadaveric feet were injected with green neoprene latex followed by a dissection. A coloured segmentation of the venous system was achieved.

The Lejars' concept of the venous sole of the foot is incorrect: the true blood venous reservoir of the foot is located deeply in the plantar veins, between the plantar muscles.

The medial and mostly lateral plantar veins converge into the plexus shaped calcaneal crossroad, where the blood is ejected upwards into the two posterior tibial veins. In addition, the several medial perforators of the foot directly connect the deep system (medial plantar veins) to the superficial venous system (medial marginal vein). This forms a true 'medial functional unit' which is unique in the limb given its directional flow is from deep to superficial. In conclusion, the plantar veins play an important role in the physiology of the venous return since a venous reservoir of 25 mL of blood is mobilized upwards with each step during walking. Therefore, the impairment of the foot pump by a static foot disorder should be considered as an important risk factor for chronic venous disease, and should be evaluated and corrected in any patient with venous insufficiency.

#### Keywords:

venous anatomy, muscular venous pumps, foot pump, plantar veins, CVD

Phlebology August 2012;27:219-30. Published ahead of print 30 July 2012. DOI:10.1258/phleb.2012.012b01

Original article

### Is endovenous laser ablation possible while taking warfarin?

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**Abstract:** **Purpose:** The subgroup of patients with venous ulcers requiring anticoagulation for co-morbid conditions has traditionally created a therapeutic dilemma. Perioperative management of anticoagulation can be costly and increase the risk of surgical complications. This group of patients is often elderly and shows poor compliance with compression hosiery. The aim of this study was to investigate the outcome of endovenous laser ablation (EVLA) of the great saphenous vein (GSV) in patients remaining on therapeutic anticoagulation.  
**Materials and methods:** Fifteen consecutive patients (CEAP [clinical, aetiological, anatomical and pathological elements] classification 5 or 6) were treated with standard GSV EVLA using tumescent anaesthesia and a diode 1470-nm radial laser fibre while maintaining international normalized ratio at therapeutic levels. Clinical and duplex follow-up at six weeks and three, six and 12 months were performed.  
**Results:** The GSV was successfully occluded in 14/15 (93%) of patients. The remaining patient had a second successful treatment three months later. No significant complications requiring intervention were encountered.  
**Conclusion:** EVLA using the diode 1470-nm radial fibre is efficacious with minimal complications in patients therapeutically anticoagulated. This treatment should be added to the armamentarium in this problematic patient group.

**Keywords:** venous intervention, endovascular treatment, laser treatment, vein, ablation.  
Phlebology August 2012;27:231-4. Published ahead of print 28 October 2011. DOI: 10.1258/phleb.2011.011031

Original article

### Preoperative determination of anatomic variations of the small saphenous vein for varicose vein surgery by three-dimensional computed tomography venography

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**Abstract:** **Objective:** To define the anatomical variations of small saphenous vein (SSV) for varicose vein (VV) surgery by three-dimensional computed tomography venography (3D-CTV) and to analyse the impact of this preoperative evaluation on surgical outcomes.  
**Methods:** A total of 120 consecutive limbs with SSV insufficiency having undergone VV surgery from January 2005 until December 2007 were enrolled. The medical records and images were analysed retrospectively.  
**Results:** The relationship between SSV and gastrocnemial vein (GNV) were categorized into two: (a) SSV and GNV drained to popliteal vein (PV) separately (100 limbs, 87%) and (b) SSV and GNV made common channel which drained to PV (15 limbs, 13%). Saphenopopliteal junction morphology was normal (75 limbs), severe tortuosity near PV (19 limbs), ampullary ectasia (4 limbs) and duplicated drainage to PV (2 limbs). No recurrence of VV was noted.  
**Conclusions:** CTV can provide thorough preoperative anatomic information of the SSV variations and reduce the recurrence of VV.

**Keywords:** varicose veins, saphenopopliteal junction, duplex ultrasound, surgery.  
Phlebology August 2012;27:235-41. Published ahead of print 28 October 2011. DOI: 10.1258/phleb.2011.011023

Short report

### Simple system for perivenous tumescent infusion for endovenous laser ablation

Alomari A.I.

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**Abstract:** The use of a simplified system for perivenous infusion of tumescent fluid prior to endovenous laser ablation is described. Two infusion bag systems using different combinations of needle sizes (22, 23 and 25 gauge) and pressure settings (300 and 600 mmHg) as well as hand injections were tested in vivo. The technique is simple, safe and may lead to quicker infusion, reduction in hand fatigue and reduced cost.

**Keywords:** tumescent anaesthesia, endovenous laser treatment, varicose vein.  
Phlebology August 2012;27:242-4. Published ahead of print 21 November 2011. DOI:10.1258/phleb.2011.011055

## Partenariat avec les revues internationales de phlébologie

### Short report

### Simultaneous appearance of leukemoid reaction and phlegmasia cerulea dolens

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#### Abstract:

A leukemoid reaction is an extreme form of reactive leukocytosis defined as granulocytic leukocytosis above  $50 \times 10^9/L$  produced by normal bone marrow, mostly in response to systemic infection or cancer. The mechanism as to how the haematopoetic system is altered to elevate production of myeloid cells is not known.

A 69-year-old man presented with phlegmasia cerulea dolens caused by massive iliofemoral thrombosis. His workout at admission revealed absolute white blood cell count of  $73.4 \times 10^9/L$ , with neutrophil granulocyte of  $68.5 \times 10^9/L$ . The new increase in white blood cell count happened at day 5 after admission, when the haematoma of the anteromedial thigh was evacuated in general anaesthesia. There was a gradual decrease in counts until they reached the normal range. Deteriorated general condition with signs of systemic inflammatory response syndrome improved with supportive therapy, and the patient was discharged from hospital after 30 days. During hospitalization we did not identify any infectious focus, or any malignancy. We could not exclude other occult chronic conditions (malignancy) but the patient did not develop any other condition during 4.5 years of follow-up.

#### Keywords:

phlegmasia cerulea dolens, leukemoid reaction.

Phlebology August 2012;27:245-9. Published ahead of print 19 January 2012. DOI: 10.1258/phleb.2011.011041

## Un événement SFP !

www.revue-phlebologie.org

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