



CLINICAL SHEET

Vascular Rehabilitation Unit

Department

Heart, Lung and Vascular

Specific treatment service provided

Since more than 25 years this Unit takes care of the global management of patients with vascular diseases and it is considered as a reference center for the clinical treatment and rehabilitation of these diseases. The activity of "diagnosis, treatment and rehabilitation of vascular diseases in inpatient, outpatient and Day Care", has been certified according to quality standard ISO 9001.

Since 1998 this Unit is a teaching center for the European Master in Angiology/Vascular Medicine held by Vascular Independent Research and Education European Organization (VAS). The Master degree entitles to the exam for the European Diploma in Angiology/Vascular Medicine certified by the European Union of Medical Specialists (UEMS). The high expertise reached in vascular diseases management is also confirmed by numerous invitations to national and international congresses, by the nomination in several Scientific Councils (Italian Society for the Study of Atherosclerosis, Italian Society of Angiology and Vascular Pathology, Italian Society of Clinical Hemorheology and Microcirculation), as well by the calling as experts at the European Critical Limb Ischemia Advocacy Summit held in Berlin by the Angiogenesis Foundation (USA). The Unit provides a full-service non-invasive diagnosis of vascular diseases in particular regarding the ultrasound examination of the various vascular districts (including those of difficult exploration such as the renal and the mesenteric) as well as other more advanced features available only at a few specialized centers (see below). Since more than 10 years this Unit has been identified by the Italian Society of Non-invasive Vascular Diagnostics (SIDV-GIUV) as the venue for a training course in vascular diagnostics with final exam, which is held annually.

Brief description of the diseases treated:

Peripheral Obstructive Arterial Disease of the lower limbs in all its stages (asymptomatic, intermittent claudication, critical limb ischemia). Diabetic Arterial Disease (Vascular Diabetic Foot), Venous Thromboembolism and severe Chronic Venous Insufficiency both primary (varicose veins) or secondary (Post-Thrombotic syndrome). Disabling Lymphedema of the lower limbs. Raynaud's syndrome and other microcirculatory disorders and vasculitis at risk of digital necrosis. Dilated Cardiomyopathy and Heart failure.

The following diagnostic procedures are available: Color Doppler Ultrasound examination of Lower and Upper Limbs Arteries and Veins, Carotid Artery, Abdominal Aorta, Renal, Celiac and Mesenteric Arteries. Ambulatory Blood Pressure monitoring. Functional capacity evaluations (Treadmill testing, 6 min Walking test). Cardiovascular Stress tests. Piezoelectric Plethysmography. Reflected Light Rheography (for Chronic Venous Insufficiency). Air Plethysmography. LaserDoppler assesment of microcirculation. Transcutaneous Oxygen and Carbon Dioxide Pressure Measurement. Heart Rate R-R Variability Analysis.



Therapeutic approach

Vascular diseases are managed with a comprehensive approach facing all aspects, from the diagnostic evaluation to the clinical management and to the implementation of the treatment both pharmacological and rehabilitative, using the most appropriate care setting. This is always performed with a multidisciplinary approach in which the different professional components of the team are involved, together, when necessary, to specialists from other disciplines.

The initial stages of peripheral arterial disease (intermittent claudication) are treated according to international guidelines, combining drug therapy and physical training. It is in fact now well established as the rehabilitative intervention, based on physical training, correction of the lifestyle, and control of risk factors, allows to obtain very good results on walking distance and quality of life. This integrated management is a feature that sets us apart and qualifies our Unit as national referral centre.

In the advanced stages of peripheral arterial disease (critical limb ischemia and vascular diabetic foot), in addition to diagnostic ultrasound evaluation, MR angiography or CT angiography may be performed, and multidisciplinary consultations with vascular surgeons and interventional radiologists can be activated in order to program the most appropriate revascularization procedure. In any case we associate a conservative medical treatment for limb salvage based on prostanoids or other vasoactive drugs infusions, adequate analgesia, topical treatment of the ulcers (which can be integrated, when suitable, by the use of vacuum therapy and hyperbaric oxygen therapy), and rehabilitation programs for the limitation of functional impairment.

Venous thromboembolic diseases (deep vein thrombosis and pulmonary embolism) are treated according to the latest guidelines from time to time using the most appropriate antithrombotic medications (low molecular weight heparins, fondaparinux, vitamin K antagonists and, in selected cases, new oral anticoagulants). The complications of these diseases, chronic venous insufficiency and post-thrombotic syndrome, are managed with compression therapy, medications and specific programs of rehabilitation and physical training.

A full clinical and cardiological assessment, including cardiac stress testing when advised, is always performed before starting the rehabilitation program, for maximum patient's safety. When appropriate, the rehabilitative sessions can be performed on continuous electrocardiographic telemetric monitoring.

Annual cases

Approximately 200 patients as inpatient, mostly with peripheral arterial disease. More than 4,000 outpatient accesses, of which about 1,500 diagnostic Doppler ultrasound. More than 20,000 procedures as inpatient (also in other Units), included about 15.000 rehabilitative sessions.

Length of treatment and follow up

The treatments usually last from 2 to 4 weeks, according to the severity of the disease. Patients are then followed up regularly at intervals of not more than one year.

e-mail gestione.clienti@ospedaleuniverona.it www.ospedaleuniverona.it