

## Curriculum Phlebology

### 1. Definition:

Phlebology includes prevention, diagnosis, treatment and rehabilitation of patients with venous diseases and venous malformations.

### 2. Knowledge and clinical experience:

A phlebologist must have knowledge and clinical experience in different components of the discipline. This includes:

- Basic sciences
- Clinical sciences
- Diagnostic evaluation
- Treatment
- Other competences

#### 2.1 Basic sciences:

##### Knowledge and clinical experience in

- Anatomy of the vascular system
- Embryology of the vascular system
- Genetics of venous and lymphatic diseases
- Physiology and pathophysiology of the venous and lymphatic system
- Histology and histopathology of venous diseases
- Wounds and wound healing
- Differential diagnosis of skin changes of the extremities
- Thromboembolic diseases
- Coagulation and anticoagulation
- Pharmacology
- Basic physical principles of diagnostic and therapeutic tools

#### 2.2 Clinical sciences:

##### Knowledge and / or clinical experience in

- Superficial venous incompetence
- Deep venous incompetence
- Perforator incompetence
- Chronic venous insufficiency
- Pelvic venous insufficiency
- Functional venous insufficiency
- Lymphatic incompetence
- Venous thromboembolism
- Venous obstruction and compression
- Venous malformations
- Venous tumors
- Vascular emergencies
- Differential diagnosis of signs and symptoms of venous diseases

### **2.3 Diagnostic evaluation:**

#### **Knowledge and clinical experience in**

- History taking
- Physical examination
- Differential diagnosis of venous signs and symptoms
- Ultrasound
  - Doppler evaluation of veins and arteries
  - Sonography, including duplex and triplex
- Dynamic venous function tests
- Edema assessment
- Venous thromboembolism diagnosis
- Disease Classification
- Severity scoring systems
- Quality of Life assessment
- Patient reportet outcome evaluation

#### **Knowledge of principles, indications and assessment in**

- Magnetic resonance imaging (MRI)
- Computed tomography (CT)
- Contrast Venography
- Laboratory tests

### **2.4 Treatment:**

#### **Knowledge and clinical experience in**

- Counselling of life style, behaviour and diet
- Compression therapy
- Pharmacological treatment of chronic venous diseases
- Wound care
- Sclerotherapy
- Endovenous ablation
- Transcutaneous venous ablation
- Venous thromboembolic diseases
  - Conservative therapy
- Treatment of venous emergencies and complications

#### **Knowledge of principles, indications and assessment in**

- Venous surgery
  - Superficial veins
  - Deep veins
- Endovascular embolisation
- Pelvic venous disorders
- Venous thromboembolic diseases
  - Invasive therapy
- Deep venous obstruction
- Anesthetic procedureds in venous therapy

### **2.5 Other competences:**

- Epidemiology
- Evidence-based medicine
- Evaluation of study results

**General recommendations:**

1. Two years of clinical education in a certified institution with personal experience in an adequate number of procedures of the above listed items seems to be adequate to gain personal knowledge, clinical experience and personal skills as preconditions to become a phlebologist.

2. ECoP accredited courses providing essential knowledge on:

Basic and Clinical Sciences, Superficial and deep venous interventions, sclerotherapy, DVT diagnosis and treatment, Doppler and duplex investigations, compression and ulcer treatment combined with a number of clinical procedures and a European exam can also be a precondition to qualify as a phlebologist.

**These recommendations are based on:**

Parsi K1, Zimmet S, Allegra C, Bergan J, Gasparis AP, Labropoulos N, Lee BB, Malouf GM, Partsch H, Rabe E, Ramelet AA, Schadeck M, Vin F; International Union of Phlebology. Phlebology training curriculum. A consensus document of the International Union of Phlebology (UIP)-2010. *Int Angiol.* 2010 Dec;29(6):533-59.

Zimmet SE, Min RJ, Comerota AJ, Meissner MH, Carman TL, Rathbun SW6, Jaff MR, Wakefield TW, Feied CF. Core content for training in venous and lymphatic medicine. *Phlebology.* 2014 Oct;29(9):587-93. doi: 10.1177/0268355514545120. Epub 2014 Jul 24.