

European Fellowship in Medical Angiology: Program Proposal

M. Catalano, MD, on behalf of the European Working Group on Medical Angiology

Introduction

In 1992 the European Working Group on Medical Angiology published "The Case for the Specialty of Medical Angiology." This document articulated the rationale for a specialty of medical angiology/vascular medicine and the need for a European fellowship on medical angiology. Specifically, we documented the present imbalance between the social cost of vascular diseases and the inadequate number of specialists in medical angiology, as well as the urgency of training clinicians and investigators with specific expertise in medical angiology/vascular medicine, given the huge increase in pathogenetic, diagnostic, and therapeutic knowledge. With increasing recognition of the need for such specialists, supported by a strong tradition of medical angiology in European centers, there is now the opportunity to produce homogeneous and improved training standards benefitting those who would aspire to research and clinical practice in the vascular field.

In Europe, the specialty or subspecialty of medical angiology/vascular medicine currently exists as an official discipline in Switzerland, Italy, and Germany. Austria is moving rapidly in this direction. France has a national diploma of angiology and a complementary specialty; *ad hominem* accreditation exists in the United Kingdom. Therefore, we propose a European fellowship in medical angiology to provide an international medical qualification to those physicians who are interested in vascular diseases. Our proposal is intended to increase the number of qualified physicians in those countries where the specialty is currently established and will also establish guidelines and enable official recognition

in those countries without a preexisting specialty of medical angiology.

The European Working Group on Medical Angiology calls for a qualification in medical angiology, defined as "pathophysiology, prevention, diagnosis, nonsurgical treatment of diseases of the arteries, veins, lymphatic vessels, and microcirculation." Training is based on a 2-year attendance at teaching centers that would educate students in clinical practice, methodology, and research. The criteria adopted for evaluating and accrediting the European fellowship programs have been established by the European Working Group on Medical Angiology and officially recognized by the International Committee on Medical Angiology of the International Union of Angiology. It is the intention of the Working Group that these guidelines will ensure a high degree of quality and some uniformity in European training programs.

Training in Medical Angiology

Training for the fellowship in medical angiology includes comprehensive training in internal medicine and in medical angiology. The duration of specific angiologic training will be at least 2 years, to be spent in a specialized angiologic unit. The International Committee on Medical Angiology of the International Union of Angiology recognizes the existing differences in training, treatment, and research in the field of medical angiology in different European countries. The following guidelines are therefore the minimal basic requirements for an accredited training program in medical angiology and also for selecting possible training centers.

General Requirements

During the training for fellowship, the trainee should receive in-depth training and experience in etiology, epidemiology, pathogenesis, pathophysi-

Address applications and correspondence to I.U.A. International Committee on Medical Angiology, Professor M. Catalano, MD, Research Center on Vascular Diseases, University of Milan, L. Sacco Hospital, via G. B. Grassi 74, 20157 Milan, Italy.

ology, symptomatology, diagnostics, prophylaxis, and treatment, including intensive care and rehabilitation in vascular diseases.

Specific Expertise

PREVENTIVE MEASURES

The trainee will learn the principles of primary and secondary prevention and risk factor modification.

DIAGNOSTIC PROCEDURES

The trainee will obtain adequate knowledge and experience in the following techniques:

History and physical examination pertaining to diseases of the arteries, veins, microcirculation, and the lymphatic system.

Noninvasive diagnostic modalities such as pulse wave recording, plethysmography, continuous wave Doppler-examination and duplex-sonography of arteries and veins, and blood flow measurement in different tissues.

Vascular pressure measurement by noninvasive methods and by direct puncture of major peripheral arteries and veins.

Principles and evaluation of biological tests used for diagnosis and treatment in angiology with special reference to endothelial function, coagulation, platelet function, and rheologic, immunologic, and lipid parameters.

Knowledge of the indications for and interpretation of different angiographic techniques.

Microcirculatory techniques such as capillaroscopy, transcutaneous measurement of tissue pO_2 , and laser-Doppler-flux measurement.

The above lexicon of knowledge should be a prerequisite for the training of the medical angiologist in diagnostic and interventional catheter techniques.

TREATMENT OF DISEASES IN ANGIOLOGY

The fellow must obtain specific knowledge of, and practical experience with, pharmacologic, dietary, and physical treatment, hemorheology, and systemic and local thrombolysis. Expertise should be obtained in compressive support and physical therapies for the peripheral venous and lymphatic system and treatment of varicose veins and venous insufficiency. Training in the local treatment of ischemic and trophic lesions will also be required.

The fellow will also learn how to counsel patients in preventive and rehabilitative methods.

The fellow should have knowledge of the indications and practical experience of catheter proceedings including indications for interventional or surgical treatment of diseases of arteries, veins, and lymph vessels, as well as the essentials of postoperative care.

EXPERIENCE WITH ALLIED DISCIPLINES

The fellow should participate in angiography conferences during the entire training period in the specialty of angiology and should be familiar with normal and abnormal arteriographic findings.

Participation in vascular surgical colloquia and vascular pathology conferences is encouraged, as are interactions with vascular surgeons.

Special knowledge in occupational and social medicine and geriatrics may also be useful to the vascular trainee.

RESEARCH

By participating in a research project, the fellow will become facile in the evaluation of the methodology of research protocols and the quality of the data. Certified participation in at least one research project is suggested.

Qualification Criteria for Teaching Centers in Medical Angiology

Head of the Teaching Center

The head of the center must fulfill the criteria of a medical angiologist with at least 5 years of experience and teaching in this field. Preferably at least two trained medical angiologists should be working in the institution.

Institution

An institution of high standing must have sufficient volume of clinical activity in the necessary diagnostic and therapeutic devices to provide quality care. There also must be excellence in research and teaching of medical angiology as evidenced by national and international publications, ability to attract candidates for research and clinical training, extramural funding, and documentation of organized educational programs.

Patients

It is recommended that a considerable number of patients with vascular diseases should be treated in the institution and closely cooperating departments.

Quality Assurance

Quality assurance should be performed in collaboration with the International Union of Angiology as well as with national societies and should include procedures, equipment, outcome, and trained staff.

Sites of Training

If the institution cannot provide all aspects of the training experience, collaborative relations between institutions may be established to provide a complete and accredited training program.

Applications

Teaching Centers

Teaching center applications should be addressed to the International Committee on Medical Angiology of the International Union of Angiology, as indicated in the footnote for correspondence. The documentation detailed in the paragraph on the training center admission criteria should be attached to the application. It will also be necessary to indicate any planned joint-cooperations with other units involving specific aspects of the program.

Despite the fact that the head of the teaching center is ultimately responsible for the clinical and scientific training of the fellows, it will be necessary to attach the curriculum(a) of the head(s) of the cooperating center(s) and documentation concerning the activities of such center(s). The International Committee on Medical Angiology of the International Union of Angiology will define and publish the list of accredited teaching centers annually.

European Fellowship in Medical Angiology

Applications for admission to the European Fellowship in Medical Angiology should be addressed to the International Committee on Medical Angiology of the International Union of Angiology. Applications should include a curriculum vitae

(résumé) and the most important scientific publications. Deadlines will be published in due time.

There will already be established medical angiologists who, by virtue of their expertise and competence, will automatically be eligible for the fellowship without the need of further training or examination.

Obtaining the Title of European Fellow in Medical Angiology

At the end of the Fellowship period, the attendees' clinical abilities will be assessed by a common European examination and the publication of at least one scientific paper prepared during the fellowship period. The above evaluation will be made by the International Committee on Medical Angiology of the International Union of Angiology, which will also confer the title of European Fellow in Medical Angiology to the qualified candidates.

European Working Group on Medical Angiology

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