

The position of an angiologist in Poland

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Abstract

Angiology is an important and dynamic medical discipline that educates physicians to be well prepared to translate knowledge about vascular biology into management of patients with vascular diseases in clinical practice. Vascular diseases that are the subject of angiology include: atherosclerosis, thromboembolism, hypertension, vasculitis, vasospastic diseases as well as venous and lymphatic disorders, which are responsible for the majority of disabilities and deaths worldwide. Angiology in Poland was included in the list of specializations in 1999. Angiology (vascular medicine) is present as a separate specialization in 11 European countries outside Poland: Austria, Czech Republic, France, Germany, Hungary, the Netherlands, Serbia, Slovakia, Slovenia, and Switzerland. In these countries, with the exception of Poland, specialization in angiology is only available to internists. It can be concluded that angiology is an opportunity to reduce not only mortality from vascular causes, but also morbidity. The need for its assignation was related to the progress of medicine, the development of new methods of vascular diseases treatment and prevention, bearing in mind that they are still a significant social and economic problem. Inequities in management of patients with vascular diseases compared to patients with heart disease may contribute to poor outcomes and increased health care costs associated with the treatment of peripheral vascular diseases.

Keywords: angiology; specialization; vascular diseases

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Angiology is an important and dynamic medical discipline, educating physicians well prepared to transfer knowledge in the field of vascular biology to the clinical care of patients with vascular diseases. The diseases managed by angiology include: atherosclerosis, thromboembolism, hypertension, vasculitis, vasospastic

diseases as well as venous and lymphatic disorders; they are responsible for the majority of disabilities and deaths in the world [1, 2].

Diseases of the peripheral vascular system are not only a significant social and economic issue, but also a human resources problem. The growing average age

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of society and the effects of the Covid-19 pandemic play a special role. Therefore, the growing demand for specialists in this regard is obvious. What does it look like from the perspective of a doctor and a patient? As angiologists who have been practicing for many years, we notice the large time gap between diagnosis and proper therapy, encountered by patients with pathologies of not only peripheral arteries and veins, but also of the lymphatic system and microcirculation. Most often, the patient's path to an angiologist is marked by subsequent visits. It could be easy to guess, that the first one is a visit to the family doctor, sometimes after trying self-treatment, supported by the ubiquitous media advertising nowadays. After no success or deterioration, the patient, especially with leg ulcers, atherosclerosis obliterans of the lower limbs, diabetic foot or chronic swelling of the limbs, goes to a surgical outpatient clinic. After subsequent days, usually weeks or even months of therapy, if there are no results, the patient is referred to a vascular disease clinic, where a large percentage of healthcare providers are vascular surgeons. In the meantime, a patient, especially a patient with a diabetic foot, can, or rather should, go to a podiatrist who will help in selecting the right footwear, orthopedic insoles and will take care of the prevention and treatment of ingrown toenails — seemingly minor problems that can lead to amputate a limb, especially in diabetic patients. The fourth stage, fortunately more and more common, is referring the patient to an angiologist; however, the waiting time also increases significantly. The path of majority of patients with vascular diseases so far is shown in Figure 1.

It is advisable for a patient with vascular problems to see an angiologist, not an internal medicine doctor, unless he also has a specialization in angiology. Nowadays, knowledge about an angiological patient requires a broad, holistic approach, which requires knowledge in the field of cardiology and diabetology, but sometimes also knowledge about the effects of drug addictions or stimulants such as nicotine, drugs, steroids or alcohol. The specialization program in the field of angiology includes the above-mentioned forms of diagnostics, enabling subsequent appropriate treatment: pharmacological treatment, local treatment and, if possible, also endovascular treatment.

The number of angiologists in Poland, approximately 250, is largely overestimated because many angiologists who also have other specializations devote as much time to angiology as possible in a given case. Sometimes, although less and less often, during a specialization exam, the examinee says that he does not know the answer because he is a specialist in medical procedural discipline and the name of his specialization is mentioned. In Europe, where specialization in the

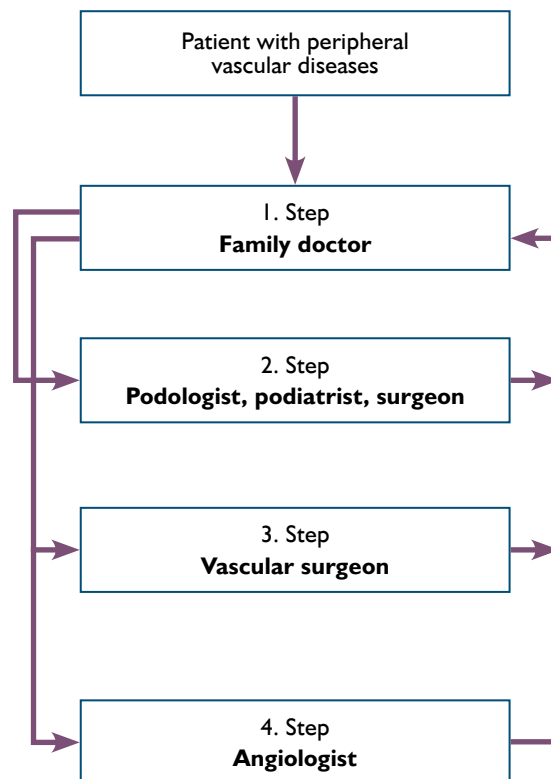


Figure 1. Currently, the most common diagnostic and therapeutic paths for most patients with peripheral vascular diseases

field of angiology/vascular diseases exists, the basis of knowledge in angiology is a thorough foundation in internal medicine.

The founder of modern angiology was Max Ratschow — a German professor, creator of the first angiology clinic in Darmstadt. In Poland, the first Department of Angiology within the structure of the Medical Academy of Wrocław was established in 1970 by Professor Józef Kaniak. Subsequently, angiology in Poland was included in the list of specializations in 1999. And what does it look like in Europe? Angiology (vascular medicine) is a separate specialization in 11 European countries. In addition to Poland, it is present in countries such as: Germany, Austria, Czech Republic, France, Hungary, Switzerland, Serbia, Slovenia, Slovakia and the Netherlands. In these countries, with the exception of Poland, specialization in angiology is only available to internists [3].

The importance of a specialization in angiology was expressed by distinguished angiologist Jeffrey Olin — “There is no (other) internal medicine specialty other than angiology for patients with extracardiac vascular disease. Peripheral vascular diseases are poorly taught in medical schools and specialization programs in inter-

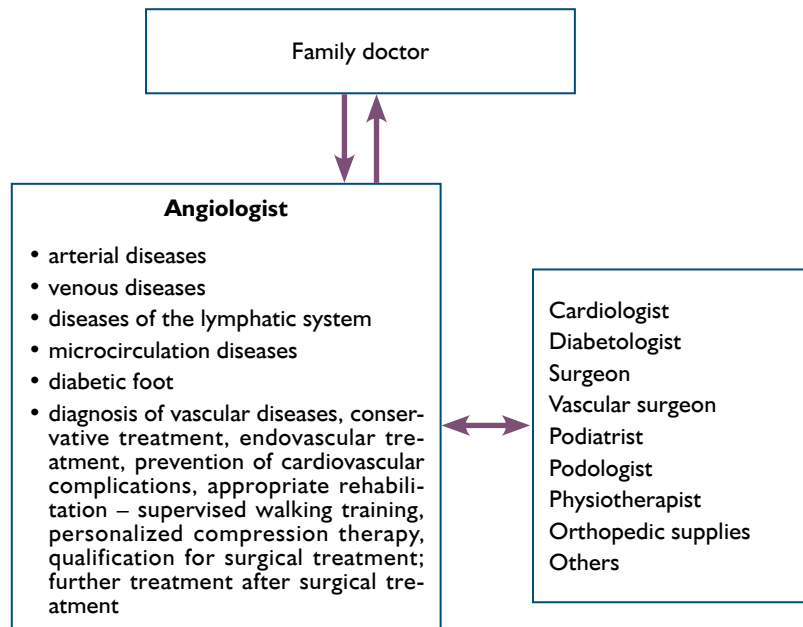


Figure 2. Proposed path for patients with peripheral vascular diseases

nal medicine and their subspecialties. There is a clear disconnect between extensive knowledge and advances in vascular biology and the clinical practice of vascular medicine” [1].

Angiology is a difficult specialization and is chosen by only a few. This is due to the fact that it is a very extensive specialization related to fields such as neurology, vascular surgery, rheumatology, cardiology, hematology, and pediatrics. But only thanks to such preparation, an angiologist has the knowledge and skills necessary to take a holistic look at patients with vascular diseases. This is extremely important because often until now a patient with vascular diseases has been or is still being treated by several specialists, e.g. due to a stroke as a result of carotid artery stenosis by a neurologist, and intermittent claudication by a surgeon, and yet pathophysiological processes in various vascular areas they are the same. Such a non-holistic view of the patient means that he is often not treated adequately.

A key issue in order to reduce mortality from vascular causes is also good cooperation between angiologists and vascular surgeons. The task of angiologists is and should be to properly prepare patients for vascular procedures and their further management after they have been performed.

As already mentioned, angiology enables integrated treatment of patients with vascular diseases, which are still the most common cause of death in the world, as well as in Poland [4, 5]. Thanks to a comprehensive view of vascular diseases, an angiologist can implement their prevention and develop appropriate health-promoting attitudes more easily and effectively. Therefore, it can

be concluded that angiology is a chance to reduce not only vascular mortality, but also morbidity. The proposed path for a patient with vascular diseases is shown in Figure 2.

Thus, using the example of a patient with intermittent claudication, it should be emphasized that 90% of these patients have atherosclerotic occlusive disease of the lower limbs, recently more and more often called peripheral artery disease (PAD) or lower extremity arterial disease (LEAD), requires only conservative treatment through lifestyle changes, physical rehabilitation and appropriate pharmacotherapy aimed at equalizing blood pressure, carbohydrate metabolism and balancing and setting the lipid profile adequately to coexisting atherosclerosis in other vascular beds and previous cardiovascular events. A patient with PAD, whether symptomatic or asymptomatic, is at high risk of adverse cardiovascular events and has a poor prognosis. That is why the role and knowledge of the angiologist is so important, as his task is to “catch” on the one hand, asymptomatic patients whose cardiovascular risk profile is as important as in symptomatic patients with PAD. In turn, in symptomatic patients with PAD, after assessing other vascular beds, implement or intensify the current treatment and direct appropriate rehabilitation treatment. The lack of sufficient numbers of angiologists, compared to — for example — cardiologists, may cause inequities in the care of vascular patients compared to patients with heart disease and may contribute to poor outcomes and increased health care costs related to vascular diseases [6].

Patients with chronic edema of the lower limbs (over 5% of the population over 65 years of age) also require comprehensive angiological diagnostics and treatment. Many of them only receive diuretics, which is a mistake in the case of lymphedema. Lymphedema is a disease diagnosed and treated primarily by angiologists. Long-term waiting for the correct diagnosis and treatment leads to frequent hospitalizations due to recurrent infections and ulcers of the lower limbs, and consequently to disability and even death [7, 8].

In the case of the venous system, the main disease is chronic venous disease, one of the most common clinical forms of which is varicose veins of the lower limbs. Patients and doctors must be aware that varicose veins are not only a cosmetic problem, but a disease that leads to difficult-to-heal ulcers and even death. In the treatment of these patients and the prevention of the most serious complication, which is venous ulceration, in addition to surgical treatment performed by phlebologists, the use of compression therapy, including vasoactive drugs, and lifestyle changes, including weight loss and physical activity, are important [9]. When it comes to the venous system, deep vein thrombosis is a life-threatening disease, which can often lead to pulmonary embolism if its treatment is delayed or inadequate.

Finally, we should also mention microcirculation diseases, which are a big and often too difficult problem for non-specialists. Microcirculation in the human body consists of 100,000 km of vessels. One of the most common microcirculatory diseases is Raynaud's disease and syndrome. Microcirculatory diseases are the domain of angiologists' treatment, requiring knowledge from many fields of medicine [10].

To conclusion, it can be said that angiology is an opportunity to reduce not only mortality from vascular causes, but also morbidity. The need for its creation was related to the progress of medicine and the development of new methods of treatment and prevention of vascular diseases, bearing in mind that they are still a significant social and economic problem. Inequities in the care of vascular patients compared to patients with heart disease may contribute to poor outcomes and increased health care costs associated with the treatment of peripheral vascular diseases.

Conflict of interest

None

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