

## Interventional neurology: A growing second specialty

Jorge Mario Gaspar-Toro<sup>1, 2</sup>  

Currently, there is a growing interest in providing optimal treatment to each patient. The development of neurointerventional techniques and materials for effective and non-invasive treatment is remarkable. Neurologists deal with cerebrovascular diseases and prevalent pathologies, such as ischemic stroke with large vessel involvement requiring thrombectomy, intra or extracranial stenosis requiring stenting, hemorrhagic stroke, and other less frequent non-vascular conditions (1). They play an active role in the entire process from diagnosis to neurointerventional treatment.

The history of neuroangiography begins with Egas Moniz, a Portuguese neurologist who pioneered the field in the 1920s. Moniz presented his research results in 1927 at the neurological society of Paris (2). In the 1970s, specialists in neurology, neuroradiology, and neurosurgery contributed to the development of techniques and equipment for performing neurointerventional procedures (3). The growth of neurointerventionalism began in 1980 with pioneers who had dual training in neurology and neuroimaging, and the creation of the first associations of neurointerventionalists (4). As early as the 1990s, interventional neurology (5) began to be discussed as a specialty within neurology and the role of the neurologist in its development.

Nowadays, in order to perform neurointerventional procedures, one must have training in neurology, neuroradiology or neurosurgery to apply for the second specialty directly, as is the case in Latin America, Europe or Asia, or by doing neurovascular or neurouci, as is the path in the United States or Canada (1). The training consists of training for two years in a recognized center that has a good volume of comprehensive management of encephalic and spinal neurovascular pathologies, ischemic arterial, hemorrhagic, venous, malformations and others.

During the neurology residency, there may not always be sufficient space to attend or accompany the neuroangiographies and procedures performed on hospitalized patients under their care. The significance of having a rotation in interventional neurology for a minimum of four to eight weeks is emphasized in various instances (5,6). This rotation provides firsthand experience in understanding the indications, procedures, complications, and subsequent management, which complements the training of neurologists who may encounter similar cases in the future.

Currently, there are no formal training programs for interventional neurology in Colombia. As a result, residents who complete their specialty and wish to pursue interventional neurology have had to seek training abroad and then return to contribute to the comprehensive management of patients in various practice centers.

Some of the countries where there are training programs are Spain, France, Turkey, Japan, India, Australia, United States, Canada, Mexico, Brazil, Argentina, among others, varying their specific designation according to their local regulations.

It is expected that the field of interventional neurology will continue to expand due to technology and improvements in techniques and treatment options, as well as

- 1 Facultad de Medicina, Universidad Nacional de Colombia, sede Bogotá, Colombia
- 2 Unidad de Neurociencias, Centro de Excelencia Neurovascular, Fundación Clínica Shaio, Bogotá, Colombia

### Correspondencia/Correspondence:

Jorge Mario Gaspar Toro, Clínica Shaio, Dg. 115a #70c-75, Bogotá, Colombia.  
Correo-e/Email: jmgaspart@unal.edu.co

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greater acceptance and appropriation by neurologists as a second specialty to be performed. Some recommendations from different societies (7–9) have been proposed to make it more recognized, including facilitating greater contact during residency, forming and participating in interest groups, and strengthening mentoring processes with those already practicing it, and thanking tutors who have facilitated rotations and early and close contact with this specialty.

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