EDITORIAL

MINOCA (Myocardial Infarction with non-Obstructive Coronary Arteries). Importance of Multicenter Registries

MINOCA (infarto de miocardio en ausencia de obstrucciones coronarias). Importancia de los registros multicéntricos

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Myocardial infarction with non-obstructive obstructive coronary arteries (MINOCA) defines a syndrome characterized by the presence of myocardial infarction criteria and the absence of significant epicardial coronary obstructions (<50% reduction in coronary diameter). (1) MINOCA includes different pathophysiological processes such as plaque disruption, microvascular dysfunction, coronary embolism, coronary spasm and coronary dissection. The objective diagnosis of the causal mechanisms is one of the main challenges that this syndrome presents in clinical practice. (2) Today, due to diagnostic advances, mainly imaging methods, it has been possible to characterize and define more accurately this currently relevant acute syndrome with a prevalence described in the literature of 5-10% according to different reports. (3)

For many years MINOCA was considered a relatively benign disease whose pathophysiology remained poorly defined until very recently. Today, we know that patients with MINOCA have a higher rate of reinfarction, compared to the general population. (4)

The entwined pathophysiology of this entity makes its management and accurate diagnosis of the underlying cause, or causes, difficult. There are numerous questions about the diagnosis and treatment of these patients, which might only be answered by systematic records and scientific studies that shed light on the different forms of clinical presentation, the mechanisms responsible for MINOCA and its treatment.

In this issue of the Argentine Journal of Cardiology, a relevant article by Dr. Rivero et al. is published, in which the authors analyze the results of the ReSCAR registry, which provides data of great value regarding the clinical characteristics of patients with MINOCA in the hospital environment. (5) Rivero et al. describe a prevalence of 8.6%, similar to that published in former international studies, (3) with a slight predominance of women (51.8%) and an average age of 65 years (53-63). The main cardiovascular risk factors were hypertension, dyslipidemia, diabetes and smoking. The rate of in-hospital complications, including mortality, was low.

Compared to patients with myocardial infarction caused by obstructive coronary lesions, type I of the Universal Definition (6), the ReSCAR registry in patients with MINOCA, shows a greater proportion of women (51.8% vs. 20.4%, p<0.001), a lower prevalence of diabetes (10.6% vs. 26.8%, p<0.001), smoking (27.1% vs. 47.3%, p=0.012) and previous infarction (11 .8% vs. 24.7%, p=0.006) and a higher prevalence of chronic angina (8.2% vs. 3.8%, p=0.084). Microvascular dysfunction was the most common causal mechanism found in the registry, although in many cases complementary diagnostic methods, either invasive (coronary physiology studies, optical coherence tomography, etc.) or non-invasive (imaging studies), which allow to establish the underlying mechanism were not used. MINOCA is a descriptive diagnosis that requires continuing with complementary diagnostic studies upon discharge, mainly cardiac magnetic resonance, in order to establish the causal mechanisms and determine what the most appropriate therapeutic and secondary prevention strategies will be. In a high percentage of patients, the cause of MINOCA is diagnosed after hospital discharge once complementary studies have been carried out on an outpatient basis.

Because the figures reported in the study by Rivero et al. regarding the etiology and pathophysiological mechanisms of MINOCA reflect the usual limitations of the in-hospital diagnostic approach, they mostly represent presumptive diagnoses, whose confirmation will depend on the possibility of continuing studies af-

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ter discharge. We must emphasize that the scarcity of medium and high complexity diagnostic resources in many centers in our country limits the possibilities of reaching a certain pathophysiological diagnosis in a high percentage of MINOCA cases.

ReSCAR is the first systematic registry involving patients diagnosed with MINOCA in Argentina. Multiple centers throughout the country participate in this registry, and its design reflects the joint effort of the researchers to define, in a coordinated and meticulous manner, variables of clinical importance and unified criteria for data collection. This is a considerable effort, especially when addressing a complex issue such as MINOCA, with great variability in its expression and pathophysiology, added to the complexity of the methods generally required for its diagnosis.

Knowing the real situation of this population in our setting with respect to incidence, clinical characteristics, gender differences, and pathophysiological mechanisms, is of great importance to guide the implementation of key diagnostic and therapeutic strategies to improve care, survival, and quality of life in this group of patients.

Certainly, this registry represents a solid basis to progress in our knowledge of this entity, promote its diffusion and take a step forward in relation to its diagnosis and treatment. An important aspect of the ReSCAR registry is that this project includes long-term follow-up of patients diagnosed with MINOCA which will allow us to know both the impact of therapeutic actions and its prognosis. Comparing these data with those of other international studies and registries and establishing cooperative studies with top-level centers on both sides of the Atlantic appears to be an attractive opportunity that will give added value to the ReSCAR registry.

Conflicts of interest
None declared.

(See authors' conflict of interests forms on the web/Additional material).

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