Introduction: Myocardial infarction with non-obstructive coronary arteries (MINOCA) accounts for 1–14% of all infarctions and represents an entity clinically defined by the presence of universal criteria for acute coronary syndrome, absence of obstructive coronary artery disease (OCD) (>50% stenosis), with no other obvious cause for the clinical presentation. The clinical characteristics and prognosis of these patients are not established.

Purpose: To evaluate the epidemiological and clinical characteristics of patients with MINOCA.

Methods: A descriptive unicentric cohort study, including consecutive patients admitted for myocardial infarction between November 2009 and December 2012, who underwent coronary angiography without evidence of OCD (without lesions >50%). Demographic, clinical, electrocardiographic, echocardiographic, laboratory data, as well as the final diagnosis were collected.

Results: A total of 349 patients were included (50.7% men, mean age 64±15 years). The most prevalent cardiovascular risk factor was hypertension (73.6%, N=257), followed by dyslipidemia (46.1%), smoking (27.8%) and diabetes mellitus (22.1%). At hospital admission, the majority (84%, N=223) had chest pain, and was in Killip class I (87.1%). The electrocardiogram had ST segment elevation in 26% of patients. The mean ejection fraction evaluated was 54±11.4%, and 44% of the patients presented segmental contractility alterations. The mean values of troponin I and NT-proBNP were 8.53 ng / L and 8897pg / ml, respectively. Angiographic non-significant coronary disease (1% - lesions <50%) was found in 29.7% (N=103) of the patients, with the anterior descending artery being the vessel most affected (45.8%). The mean duration of hospitalization was 8.22 days. In the majority of the cases, 65.3%, a specific etiological diagnosis was not assumed. The diagnosis of myocarditis was established in 11.2% of cases, in 8% of Tak-Tsubo cardiomyopathy, in 6.9% of endothelial dysfunction/microvascular disease, in 3.4% of cardioembolic infarction and 3.2% spasm coronary was the diagnosis. The mean follow-up time was 4.3±2.1 years, and it was verified that 9.2% (N=32) had re-hospitalization for any cardiovascular cause. The overall mortality rate during the follow-up period was 17.5%.

Conclusions: This study demonstrates the experience of a tertiary center with MINOCAS, reinforcing the heterogeneity of this group, as well as difficulty in identifying a final diagnosis (in the majority of patients, from 2009 to 2012). Comprehensive etiological research is essential for therapeutic appropriateness.