Clinical presentation findingsin young adults at the chest pain unit

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Introduction: The incidence of acute coronary syndromes (ACS) in young adults (YA) is associated with socio-economic impacts. Risk factors such as stress and substance abuse are more common in this population, as well as non-atherosclerotic coronary artery disease. The characterization of the clinical presentation of YA with suspected ACS helps to understand the natural history of this disease.

Purpose: To compare risk factors, occurrence of ACS and type of chest pain (CP) between YA and individuals over 45 years old with suspected ACS

Methods: A total of 2047 patients consecutively admitted into the CPU with symptoms suggestive of ACS and divided into 2 groups: individuals aged $\leq$45y were included in YA group and those with> 45y in the NYA group.Chest pain (CP) was classified as atypical (type C or D) or typical (type A or B) according to clinical criteria obtained on admission and traditional RF for ACS were evaluated. Patients underwent serial assessment of EKG and troponin I on admission and after 6 hours. Statistical analysis used Student's t test and chi square.

Results: Young Adults accounted for 13.1% of the population and the ACS occurrence rate in this group was lower than in NYA (4.8% vs 22.1%; $p <0.001$). Atypical CP was more frequent in YA (85.2% vs 51.4%; $p <0.001$) but no difference was found in the occurrence of ACS between YA and NYA with atypical CP (15.4% vs 10.7%; $p = 0.96$). Family history was the most prevalent in RFin YA (28.3%) and hypertension in NYA (58.2%). The occurrence of smoking and sedentary lifestyle was similar in the 2 groups (11.6% vs 17.1% and 20.5% vs 25.4%; $p = NS$). Diabetesand dyslipidemiawere more frequent in NYA (32.1% vs 4.1%; $p <0.001$ and 35.6% vs. 14.2%; $p <0.001$). Among the cases of ACS, the prevalence of RF was similar in the 2 groups and family history was the least prevalent in NYA.

Conclusion: Young adults account for over 10% of ACS suspicions, and although they had a lower prevalence of ACS and more atypical symptoms, YA showed different RF distribution strongly influenced by family history. These findings reinforce the need for an individualized approach in this population.