**LIPID PROFILE IN 3 DIFFERENT ETHNIC GROUPS IN THE VERY ONSET OF ST SEGMENT ELEVATION MYOCARDIAL INFARCTION (STEMI)**

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Objectives: To analyze lipid profiles during the acute phase of myocardial infarction among three different ethnic groups [Italian (ITA), Scottish (SCT) and Chinese (CHI)]. Background Lipid profile changes soon after admission for an Acute Coronary Syndromes.

Methods: The “First acute myocardial infarction” (FAMI) study enrolled 887 patients with first STEMI without previous history of coronary artery disease and their controls. Blood samples were collected within 6 hours from symptoms onset, before treatment. All levels were measured in a central core laboratory. Patients with a history of dyslipidaemia were excluded from our analysis in order to avoid confounding factors as treatment and life-style modifications. The serum lipid profile of 611 patients (ITA:191, SCT:157, CHI:263; median age ITA:61yr, SCT:60yr, CHI:62yr; males ITA:78%, SCT:91%, CHI:78%) was analyzed. All results are expressed as median (IQR).Results Lipid profiles of patients are significantly different among the 3 countries [Total Cholesterol mg/dL (ITA:224.8 (191.7-253.2), SCT:236.1 (204.9-268.2), CHI:204.1 (175.0-228.5); p < 0.0001), HDL Cholesterol mg/dL (ITA:40.57 (33.90-49.24), SCT:40.89(35.33-49.82), CHI:37.81 (33.16-45.11); p 0.0009), LDL Cholesterol mg/dL(ITA:158.2 (128.2-195.8), SCT:158.8 (121.5-194.3), CHI:132.1 (107.2-160.8); p < 0.0001), Triglycerides mg/dL(ITA:110.5 (73.73-146.4), SCT:123.0(81.88-183.7), CHI:126.4 (84.91-185.0); p <0.0001), Apolipoprotein B/Apolipoprotein A1 ratio (ITA:1.16 (0.96-1.36), SCT:0.93 (0.80-1.11), CHI:1.09 (0.93-1.30); p <0.0001)].

Conclusions: Lipid profile in the acute phase of STEMI between 3 countries are significantly different. Despite statistical significance, the distribution of values is widely overlapped among ethnic groups, implying a poor clinical significance. These differences are most likely due to genetic background and dietary habits.