Late outcomes of percutaneous coronary interventions (PCI) and subsequent life-quality in patients younger 40 years of age

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Background: Late results of PCI in patients aged ≤40 years are few presented without differentiation of groups with acute coronary syndrome (ACS) vs. Stable Angina, and age borderlines ≤35 years vs. 36–40 years. Health-life quality following PCI in patients ≤40 years of age not studied.

Objective: To analyze predictors of outcomes, and subsequent life-style in patients aged ≤35 vs. 36–40 years underwent PCI according to ACS vs. Stable Angina.

Material: Enrolled 208 consecutive patients with coronary artery disease aged 24–40 years, of them 157 (75.5%) – aged 36–40 years, 51 (24.5%) – ≤35 years. 197 (94.7%) patients underwent revascularization of the myocardium, of them: 165 (79.3%) patients underwent PCI; 32 (15.4%) – CABG. 11 (5.3%) patients abandoned revascularization. Late results of PCI, and subsequent health-life quality studied in 126 (76.4%) of 165 patients on 10–108 months (mean 62.5±2.6).

Results: 84 (50.9%) patients underwent PCI according to ACS; 81 (49.1%) – Stable Angina, without any complications. In-hospital, and 30-days mortality 0%.
Actuarial survival on 9 years comprised 99.2%; cardiac mortality – 0.8%; events-free survival on 1–2–3 years comprised 90.5–84.1%-81.7%; on 5–9 years – 79.4%.
Active lifestyle verified in 74.6% patients; sparing lifestyle – in 25.4%; return to work – in 86.5% patients. 86.1% examined preserved family; transitory sexual disorders revealed in 28.6% patients. Regular medication, and dietary regimen followed by 83.3% & 27.8% patients. Continue smoking & abuse energetic drinks 34.1% & 23.8% examined; overweight and obesity persisted in 23.8% & 19% examined patients. 23% patients fall in depression tied with re-MI/aingina; 18.3% – with quarantine (COVID-19); 6.3% examined suffered ‘panic attack’ waiting recurrence of angina. Re-MI/aingina revealed in 23% patients; 20.6% examined underwent re-PCI.

Conclusion: Predictors of poor outcomes were: 1) ACS; 2) age in time of PCI ≤35 years; 3) early MI, DM, LVEF ≤35–40%; 4) used stents diameter <28mm.; 5) continued smoking, and abuse of energetic drinks. Leading independent predictor – aggressively current atherosclerosis & DM in individuals ≤40 years of age leading to rapid dysfunction of stents; in patients with patency stents – lesion of native or “protected” coronary arteries.