Abstract: **P1271**

**Systolic dysfunction in obese and extreme obese patients and preliminary results after bariatric surgery**

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**Topic(s):**
Echocardiography: Systolic and Diastolic Function

**Citation:**

Background

Obesity is known to be associated with left ventricular (LV) diastolic dysfunction, heart failure and some risk factors for early atherosclerosis: diabetes mellitus, arterial hypertension, dyslipidemia. Very few studies investigate extremely obese patients and how this condition impairs LV systolic function.

The aim of the study is to explore the effect of obesity and extreme obesity on LV systolic function in patients without diabetes mellitus and the effect of bariatric surgery on that function.

Methods: We prospectively investigated 55 patients with obesity class 1 and 2 and 23 patients with extreme obesity who underwent bariatric surgery. The participants were grouped according to body mass index (obesity class 1 and 2 BMI = 30 – 40 kg/m² and extreme obesity = 40 kg/m²). Systolic function was assessed by ejection fraction by Simpson and Teicholz, global longitudinal strain, Tei index.

Results: In the studied groups statistical analysis proved the relation between all investigated echographic parameters and BMI. The mean left ventricular ejection fraction and GLS values were 55% (±10%) vs. -17.3% (±3.3%) for obese and 51% (±8%) vs. -16.5% (2.3%) for extreme obese (p < 0.05).

Patients with extreme obesity, who underwent bariatric surgery increased LV ejection fraction faster and more than patients who underwent only dietary and medical treatment. 5.0 (9.0) % vs. 3.0 (10.0) % (p < 0.05).

Conclusion: Obesity and extreme obesity impair all studied parameters for LV systolic function. Bariatric surgery is treatment option for extreme obesity patients and a possibility for significant and fast improvement of LV systolic parameters.