Prevalence of undiagnosed pre-diabetes or diabetes in patients with HFpEF presenting in the emergency department.

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Introduction : Heart failure with preserved ejection fraction (HFpEF) has become a common cause of visiting the emergency department (ED). Type 2 diabetes mellitus (T2DM) is one of the important predisposing factors.

Purpose : To study the prevalence of undiagnosed pre-diabetes or T2DM in the patients visiting the ED due to HFpEF.

Methods : 93 consecutive patients without known history of T2DM visited the ED with signs and symptoms of heart failure. Left ventricular ejection fraction (LVEF) was calculated using bedside ECHO. LVEF>50% was used to classify HFpEF patients. HbA1c was measured to all patients and the cutoff for T2DM was HbA1c>6.5% and for pre-diabetes 5.7-6.4%. Body mass index (BMI), brain natriuretic peptide (BNP), creatinine and hemoglobin (Hb) were also recorded. Results are interpreted as mean±SD.

Results : Mean age was 56±11.8 years. 64/93 (68.8%) were female and 29/93 (26.97%) male. Mean BMI was 36.52±7.34 kg/m2 and mean Hb 13.51±3.45 g/dl. Mean BNP was 584.82±212.97 pg/ml. Mean creatinine was 1.11±0.36mg/dl. 19/93 (17.67%) patients had HbA1c>5.7-6.4% and were classified as pre-diabetics and 23/93 (21.93%) had HbA1c>6.5% and were classified as diabetics. We did not identify any correlation between the rest of the parameters.

Conclusion : 44.64% of the patients that visited ED due to signs or symptoms of HFpEF were identified as having either pre-diabetes or T2DM. Taking into consideration the importance of the presence of T2DM in the prognosis of the patients with HFpEF, it would be reasonable to screen all patients with HFpEF for T2DM and suggest specialized treatment.