Introduction
Mast cells are critical effectors in inflammatory diseases, including cardiovascular and metabolic diseases and their associated complications. These cells exert their physiological and pathological activities by releasing granules containing histamine, cytokines, chemokines, and proteases, including mast cell-specific chymases and tryptase.

Objectives
The aim of the study is to detect the role of mast cell in diabetic obese and to detect correlation to different diabetic complications.

Methods
70 Type 2 diabetic obese patients attending the Diabetes and Endocrinology clinic in Kasr El Ani hospital compared to 15 healthy control.

Full medical history, complete physical examination, Anthropometric measurements (BMI, waist circumference), Michigan neuropathy score, Echo heart, fundus examination, fasting glucose, HbA1C, serum cholesterol, triglycerides, LDL, HDL, A/C ratio, and tryptase level.

Results
Statistical difference between patients and control regarding BMI, glucose, cholesterol, HDL, LDL, tryptase (p<0.001), triglycerides (p=0.001). Tryptase correlated with BMI, fasting glucose, HbA1C, triglycerides which is statistically significant (p=0.014, r=0.031)/(p=0.012, r=0.297)/(p<0.001, r=0.862), (p=0.039, r=0.247). Tryptase is higher in patients with complication mean value (39.32±4.9) ng/ml. 4 patients with retinopathy, 6 patients with peripheral neuropathy, 3 patients diabetic nephropathy, 8 patients with ischeamic heart disease, 3 patients with cerebro vascular disease.

Conclusions
Tryptase participate in the pathogenesis of diabetes mellitus and its complication targeting mast cells as novel therapy for diabetes requires further investigations.

References:
Michael A. Shi and Guo-Ping Shi Different roles of mastcells in obesity and diabetes: lessons from experimental animals and humans. frontiers in immunology , 2012(3): 7-11