Multiplicity of dysmetabolic components in males is associated with cardiac troponin T concentrations

Potential clues to chronic myocardial stress in the male metabolic syndrome

Assi milwidsky, Arie Steinvil, Itzhak Shapira, Sivan Letourneau-Shesaf, Hezzy Shmueli, Shlomo Berliner, Ori Rogowski

Conflict of interest

- To the best of our knowledge, no conflict of interest exist in this research work

BACKGROUND

- Chronic myocardial stress and increased cardiovascular risk is associated with enhanced release of cardiac troponin T in the general population
- There is a paucity of data regarding the relation of cardiac troponin to the metabolic syndrome (MetS)

- Saunders JT, Nambi V, de Lemos JA, Chambless LE, Virani SS, Boerwinkle E, Hoogeveen RC, Liu X, Astor BC, Mosley TH, Folsom AR, Heiss G, Coresh J, Ballantyne CM. Cardiac troponin T measured by a highly sensitive assay predicts coronary heart disease, heart failure, and mortality in the Atherosclerosis Risk in Communities Study. *Circulation.*123(13):1367-1376
- de Lemos JA, Drazner MH, Omland T, Ayers CR, Khera A, Rohatgi A, Hashim I, Berry JD, Das SR, Morrow DA, McGuire DK. Association of troponin T detected with a highly sensitive assay and cardiac structure and mortality risk in the general population. *JAMA.*304(22):2503-2512

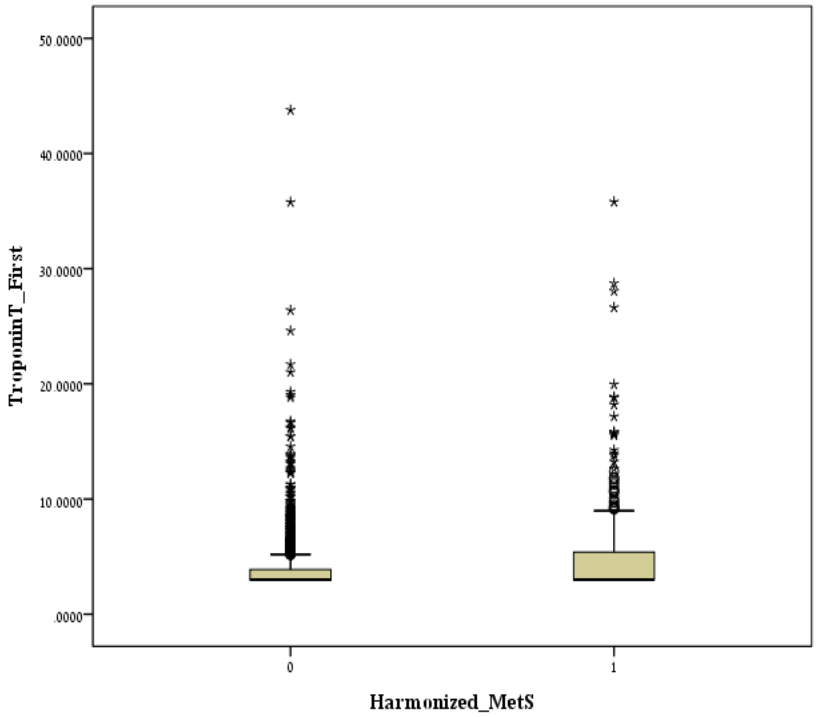
METHODS

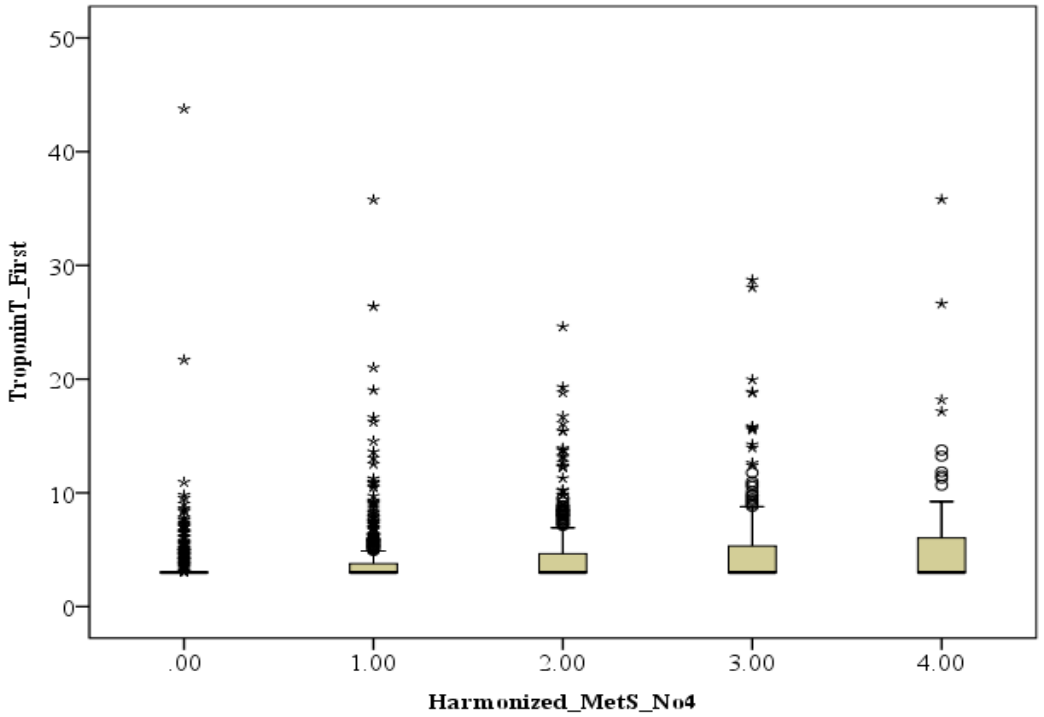
- A cohort of male patients undergoing health survey in the Tel Aviv inflammation medical center survey was examined
- Prevalence of high sensitivity cardiac Troponin T (hs-cTnT) was determined
- We evaluated hs-cTnT association with the presence of the metabolic syndrome components

RESULTS

- A total of 1641 men with no known cardiovascular disease were recruited
- MetS was diagnosed in 330 (20.1%)
- hs-cTnT concentration was higher in patients with the MetS ($p<0.001$)
- Number of MetS components was associated with the level of hs-cTnT ($p<0.001$ for trend)

CONCLUSION





- The MetS in males is associated with higher levels of hs-cTnT than the general population, with each component increasing hs-cTnT value