

International Conference on

Environmental Health & Safety

October 24-25, 2016 | Valencia, Spain

BIOMARKERS OF CARDIOMYOCYTE INJURY AND STRESS IDENTIFY LEFT ATRIAL AND LEFT VENTRICULAR REMODELING AND DYSFUNCTION: A POPULATION-BASED STUDY

Susana Ravassa Albéniz*

*University of Navarra, Spain

Background/Objectives: The validation of effective screening tools for the identification of patients with subclinical myocardial remodeling is a major clinical need. Thus, we explored the associations of circulating biomarkers of cardiomyocyte injury and stress with subclinical cardiac remodeling and dysfunction, and with biomarkers reflecting collagen turnover.

Methods: We randomly recruited 727 subjects from a general population (51.2% women; mean age 51.3 years). Measurements included echocardiographic left atrial (LA) and left ventricular (LV) structure and function, quantification of high sensitivity cardiac Troponin T (hs-cTnT), NT-proBNP, and biomarkers of collagen type I and III turnover.

Results: In unadjusted and adjusted analyses, the prevalence of LA enlargement (LAE), LV hypertrophy (LVH) and LV diastolic dysfunction (LVDD) increased with higher hs-cTnT ($P \leq 0.031$). NT-proBNP was independently associated with LVDD ($P = 0.009$). Both biomarkers combined yielded significant integrated discrimination and net reclassification improvements ($P \leq 0.014$ and $P \leq 0.009$, respectively) for LAE, LVH and LVDD, over the conventional risk factors, and were independently and positively associated with biomarkers of collagen type I turnover. In a sensitivity analysis, after excluding participants with previous cardiac diseases, our findings remained consistent.

Conclusions: Our population-based study suggested that subclinical LV and LA remodeling were associated with hs-cTnT, and that, in combination with NT-proBNP, hs-cTnT showed incremental diagnostic utility over the conventional risk factors. Both biomarkers were associated with biomarkers of collagen type 1 turnover. Thus, biomarkers of cardiomyocyte microinjury and hemodynamic stress may stimulate fibrosis-related mechanisms and facilitate the diagnosis of subclinical LA and LV remodelling and dysfunction in the general population.

sravassa@unav.es

FACTOR INFLUENCING SPUTUM SMEAR CONVERSION AT THE END OF TWO MONTHS OF TUBERCULOSIS TREATMENT AMONG NEW SMEAR POSITIVE PULMONARY TUBERCULOSIS PATIENTS IN ADDIS ABABA, ETHIOPIA

Zerihun Yaregal*

*Gondar University, Ethiopia

Limited data are available on factors associated with persistent sputum smear positivity at the end of second months of anti-TB treatment in Ethiopia. The present investigation was undertaken to identify factors influencing sputum smear conversion at the end of second months of anti-TB among new smear positive pulmonary tuberculosis patients registered in a directly observed treatment – short course (DOTS) programme in Addis Ababa, Ethiopia. Case-control study was performed in Addis Ababa public health centers from December 6/2012-January 30/2013. Cases were 78 sputum smear positive TB patients who started anti-TB from the period of February 9 to October 10/2012, with a positive sputum smear at the end of second months of anti-TB, randomly selected from the prepared sampling frame. Two controls were recruited for each case from the same health facility and nearest the date of diagnosis in each case with negative sputum smear at the end of second months of anti-TB treatment. Data were collected using a pre-tested questionnaire by trained data collectors. Data was entered using EPI-Info version 3.5.1 and analyzed using SPSS version 20. Odds Ratio & 95% Confidence Interval (CI) used to measure the associations.

zeruhewan@gmail.com