Author's response to reviews

Title: Low concentrations of serum testosterone predict acute myocardial infarction in men with type 2 diabetes mellitus

Authors:

Bledar Daka (bledar.daka@allmed.gu.se)
Robert D Langer (rlanger@medicine.nevada.edu)
Charlotte A Larsson (charlotte_a.larsson@med.lu.se)
Thord Rosen (thord.rosen@medic.gu.se)
Per Anders Jansson (per-anders.jansson@medic.gu.se)
Lennart Råstam (lennart.rastam@me.com)
Ulf Lindblad (ulf.lindblad@gu.se)

Version: 2 Date: 5 March 2015

Author's response to reviews: see over
Dear Editor,

Please attached find our manuscript entitled:

Low concentrations of testosterone predict acute myocardial infarction in men with type 2 diabetes mellitus. By Bledar Daka, Robert Langer, Charlotte A Larsson, Thord Rosén, Per Anders Jansson, Lennart Råstam, Ulf Lindblad:

This work describes the association between concentrations of serum testosterone and acute myocardial infarction in both men and women in a prospective study in Sweden. We accordingly measured the concentrations of testosterone and SHBG among participants in a population survey in Sweden examined at baseline 1993-1994. The incidence of acute myocardial infarction was ascertained by record linkage with national inpatient and mortality registers. Cox regressions analyses stratified by sex and the presence or absence of type 2 diabetes showed a modifying effect of type 2 diabetes in the association between concentration of testosterone and AMI. In men with type 2 diabetes, low concentrations of serum testosterone predicted AMI in this survey independent of other factors. To our understanding, we are the first to provide information regarding the association between concentrations of serum testosterone and incident acute myocardial infarction exploring the modifying effect of type 2 diabetes.

Low concentrations of testosterone have previously been associated with the metabolic syndrome and type 2 diabetes. Our results suggest a more direct effect of testosterone in the coronary vessels especially in individuals with type 2 diabetes. The major contribution of the current work is to highlight the importance of testosterone concentrations in subjects with type 2 diabetes where trials investigating the effect of testosterone replacement therapy with cardiovascular endpoints may be needed.

Hence, we believe that our work would be very much of interest to researchers of diabetes, especially those interested in macrovascular complications of type 2 diabetes, and to the general readers of BMC Endocrine Disorders. All authors have read the final version of this manuscript and agree to the submission of this paper to BMC Endocrine Disorders.

These findings have been exposed in the 49th Annual Meeting of EASD 2013 during an Oral presentation session, however they are not under consideration for publication elsewhere.

In case of any questions please do not hesitate to contact us anytime.

Gothenburg October 31, 2013

Sincerely,

Ulf Lindblad, Professor of family medicin (ulf.lindblad@allmed.gu.se)
Bledar Daka MD, (bledar.daka@allmed.gu.se)
Department of Primary Health Care, University of Gothenburg, Sweden.