Author's response to reviews

Title: Correlation of Renin Angiotensin and Aldosterone System Activity with Subcutaneous and Visceral Adiposity: the Framingham Heart Study

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Version: 2 Date: 29 August 2011

Author's response to reviews: see over
Dear Prof. Davies,

Please find enclosed our manuscript, entitled “Correlation of Renin Angiotensin and Aldosterone System Activation with Subcutaneous and Visceral Adiposity: the Framingham Heart Study” for consideration as an original article in BMC Endocrine Disorders. We believe that your readers will be interested in our study, which examines the association between regional fat deposits and activity of the renin-angiotensin-aldosterone system (RAAS).

Evidence from population-based studies indicates the majority of hypertension cases may be directly attributable to obesity. There is compelling evidence for the existence of an adipose tissue RAAS, and systemic activity of this system has been proposed as a mechanism of obesity-related hypertension. To investigate this, we hypothesized that RAAS activation may be related to variation in regional adipose deposits, particularly subcutaneous and visceral adipose tissue. We examined relations of RAAS activation, as assessed by circulating plasma renin activity, serum aldosterone level and aldosterone:renin ratio, with specific regional adiposity measures in a large, community-based sample from the Framingham Heart Study.

We found no association between any specific adiposity measure and activation of the RAAS system in overall, sex-stratified or multivariable-adjusted analyses. Our findings argue against adipose tissue making a significant contribution to systemic RAAS activity and, by extension, suggest that this is not a primary mechanism by which obesity might result in changes in blood pressure.

This manuscript has not been published nor is it being submitted elsewhere. Thank you for your consideration, we look forward to hearing from you.

Sincerely,

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