Reviewer's report

Title: Effects of Aging and Diabetes on Resting and Post Occlusive Hyperemia of the Forearm; the Impact of Rosiglitazone

Version: 1 Date: 23 November 2004

Reviewer: Peter Gross

Reviewer's report:

General

J.Petrofsky et al.report a reduction of baseline endothelial function and of its response to ischemic occlusion with age in normal volunteers and in diabetic patients. In the latter 3 months of treatment with rosiglitazone improved endothelial function significantly.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1) The diabetics are not well characterized. (Did they all have type II D.M.? For how many years had they received treatment of the D.M.? How much end-organ damage did they have, e.g. cardiovascular events, microalbuminuria or other? How many had hypertension? What was the blood pressure before rosiglitazone and after 3 months of it? What was the state of glycemia at 3 months as compared with baseline? What was the state of hyperlipidemia before and after rosiglitazone? Were concomitant medications kept constant throughout the observations? Did the diabetic patients receive any of the following agents: ACE inhibitors, statins, antioxidants?

2) Effect of age per se on blood flow in normal volunteers: were the younger and the older individuals comparable in their physical constitution? (Did they have comparable blood pressure, BMI, lipids?) (Did the authors perhaps assess parameters such as homocysteine or advanced glycation end products?)

3) Conclusion of different mechanisms of endothelial dysfunction in diabetes vs. old age: the evidence provided for this is deductive and indirect. In view of the possibly uncontrolled factors mentioned above it is also hypothetical. In order to conclude that different mechanisms are in operation direct experimentation of the processes possibly involved is necessary. It appears that no direct experiments of this kind were made.

4) Resting blood flows: Wouldn't it be necessary to comment the following: smoking, state of physical training, possible use of beta blockers?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1) There should be more attention to the spelling of some words: e.g.: p.5 4 ml/day of rosiglitazone is probably 4 mg/day; p.11: "exaserbates", "admistration", "diaetes".

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions
Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests.