Reviewer's report

Title: Obesity and statins are both independent predictors of enhanced coronary arteriolar dilation in patients undergoing heart surgery

Version: 1 Date: 6 January 2013

Reviewer: Vahagn Ohanyan

Reviewer's report:

1. Figure 1 B shows the majority of the patients are BMI Between 25-30. This is the range for overweight patients. When BMI is >35, the vasodilation respond drops dramatically. Here you show only 3 patients. Have you ever done vasodilation respond in patients, whose BMI is > 35. Also can you explain why one of the patient vasodilation was negative?

2. Have you ever tested the vasoconstriction respond of the vessels isolated from this patient?

3. Bradykinin is not the only best mediator to study endothelium dependent vasodilation. Bradykinin plays little role in coronary metabolic flow regulation. Have you ever tried the vasodilatation respond to Ach, or NO, or hydrogen peroxide. And also it will be important to study endothelium denuded vessels vasodilation respond.

4. Table 1. 55.6% of patients (BMI<30) were under the ACE inhibitor treatment. It is well known, that ACE inhibitors inhibit bradykinin degradation and increase the level of the BK in the blood. Is it possible this high level of BK decreases the sensitivity of the vessels or effects on vasodilation respond, which you observed here? Indeed, endothelium dependent effect of statins is mediated by NO. In BMI< 30 group 72% of patient were under statin treatment (BMI>30 was 53%). And also you have more patients in this group (36vs.28). All this brings to the passive diameter of the vessels you show here. It is not significant, but it can significantly affect on the calculation of vasodilation respond to BK. In this scenario, I think it will be better to induce maximal vasoconstriction and then treat with BK or other vasodilators.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests'