Reviewer’s report

Title: Factors associated with postprandial lipemia and apo A-V levels in individuals with familial combined hyperlipidemia

Version: 2 Date: 30 September 2014

Reviewer: Yoshio Fujioka

Reviewer's report:

Almeda-Valdes et al. demonstrated that in familial combined hyperlipidemia (FCH), fasting triglyceride (TG) level is the main factor associated with postprandial hyperlipidemia and that apo A-V response is related to the TG postprandial increment. The results are very interesting and this report suggests the significance of apoA-V measurement for evaluating dyslipidemic mechanism in FCH. However, there are many parts of poor presentation and logic leap in the explanations for results and there are some major problems in the discussion. As a whole, general readers cannot accept the conclusion easily. For the publication, authors should improve many parts described below and others.

Major points

1. It is absolutely difficult to understand the explanation at P8 L175-P9L179. In postprandial stage, chylomicron and their remnants are generally observed in many previous reports. ApoA-V is associated with TG-rich lipoprotein and cellular experiments demonstrated that apoA-V binds to VLDL and HDL [reference 22]. However, it is not clear whether apoA-V transfers and binds to chylomicron and their remnants at fasting and postprandial stage in human blood. From the recent reports, it does not have enough evidences to use ApoA-V levels as a representative for VLDL.

2. The most important problem is the characters of FCH, meaning that fasting TG and cholesterol levels usually change at sampling as type IIa, IIb, or V hyperlipidemia. Authors should add the explanation for the table 4 and figure 2.

3. In addition, if authors want to state the association of fasting TG levels with postprandial TG levels, authors should demonstrate not only iAUC (TG iAUC), but also AUC with absolute levels (TG AUC). Because subjects are FCH, the fasting TG levels are various.

4. How is fasting apoB-48 related with TG iAUC or TG AUC?

5. In addition, why was apoA-V iAUC associated with apoB-48 iAUC? Authors should refer to these questions in the discussion.

6. P12 L253-258; It is hard to understand these sentences. Authors showed the postprandial significant increase of apoB48 and relation of apoB48 with TG. Many reports already demonstrated that apoB-48 postprandial response may be dependently associated with obesity and hypertriglyceridemia, and fasting B-48 levels is important for postprandial lipemia.
7. Authors classified 4 groups according to the levels of TG and WHR, but analysis with comparison among 4 groups will lead to confusion. It is well known that FH is heterogeneous dyslipidemic condition with or without metabolic syndrome and impaired glucose tolerance. For the essential goal that authors want to reveal, authors should separately analysis for fasting and postprandial lipids in each group.

Minor points
1. P10L207; Do apoB levels mean fasting stage?
2. There are many parts of mistake of words.
3. How did authors measure LDL-C levels when they could not use Friedwald’s formula?

Level of interest: An article whose findings are important to those with closely related research interests

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

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.