Reviewer's report

Title: Effect of fruit and vegetable concentrates on endothelial function in metabolic syndrome: A randomized controlled trial

Version: 1 Date: 4 May 2011

Reviewer: Vijay Ganji

Reviewer's report:

Ali et al investigated the effect of fruit and juice powder on endothelial function in persons with metsyn, diabetes, and cardiovascular disease.

I wish the manuscript had line numbers for easy identification.

Major revisions:

Page 5 Para 3: The criteria used for selecting subjects were not exactly based on the guidelines from the AHA/NHLBI. 3 out of 5 should be used for identifying the metsyn phenotype. It is modified criteria. The rationale should be given for deviating from general criteria.

Page 7, para 4: Did the authors test for normality before they used parametric analysis. If the data were not normal, they should use Man Whitney test or Wolcoxin test with Kruskall Wallis.

Did they measure the dietary intake? It is possible that the their diet may have interfered with the findings. This is a potential limitation and needs to be mentioned along with other limitations. This needs to be discussed.

I assume that the subjects were asked to maintain their normal diets (self-selected diets). If so, this needs to be stated.

What about the alcohol? Did subjects drink alcohol during the study? This may also have some influence on endothelial function and flow-mediated dilation.

Needs to give a general justification for having a wash out period.

Needs editing of paragraphs. Some are out of sequence. Needs to arrange in a logical fashion for enhanced readability and clarity. See below.

Minor points

Please remove "precursor" instead use a "risk factor" for type 2 diabetes throughout the manuscript.

Abstract: Please make, "Background and objective" because the "Background" in fact has both background and objective.

Abstract: Methods, last sentence: add "body" before "weight"
Abstract: Results: Remove the last sentence, "Of note...."

Methods: Page 5: Combine #4 and #5 paragraphs with #2. Make one grant paragraph with subheading of "Participants".

Completely avoid "one sentence" paragraphs. There were too many 1 or 2 sentence paragraphs.

Results: Page 8. Move 1st paragraph to methods. That is methodology not per se results. Start restuls section with "Baseline characteristics...."

Discussion: 1st para, 3rd line. "Endoytheial function was faily normal" I am not sure if that was correct. In the methodology, they described, FMD <10% is considered imparied indothelial function. In the table, the baseline FMD was 8%. That means the subjects were "not faily normal". They were "fairly on the unhealthy side".

Tables: They were very poorly constructed. There are some basics in table building. Atleast draw lines between heading and text and between text and the foot note. Footnotes need to be identified with superscripts in the text of the table.

Tables: Please use "Mean plus or minus SD" in 1 column rather than in 2 columns.

Tables are stand alone. Table should convey the whole story without refering to the text.

Please revome the Table 4. I never seen a one line data table. Please mention this in the text under results.

Figure 1: Please mention actual treatment name instead of "Alterantive treatment assignment".

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.