Reviewer’s report

Title: Serum adiponectin and transient elastography (FibroScan) as non-invasive markers for postoperative biliary atresia

Version: 1 Date: 22 September 2010

Reviewer: Anna Baranova

Reviewer’s report:

The following is a review of the article, “Serum adiponectin and transient elastography (FibroScan) as non-invasive markers for postoperative biliary atresia” by:

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The question which was posed by the authors of this paper was to determine serum adiponectin levels in patients with biliary atresia (BA) and to investigate the relationship of adiponectin levels with clinical parameters of BA. The authors of this paper outlined their hypothesis as an association of serum adiponectin levels with the severity of clinical outcomes and the liver stiffness in postoperative BA patients. However, the manuscript has a number of avenues open for improvement.

MAJOR ISSUES:

1. Most of the published papers (>300) points at the protective role of adiponectin in human liver diseases rather than using it as Negative prediction factor. The evidence of adiponectin levels rise in some types of liver fibrosis came only recently. Authors needs to do better job in describing the positive/negative correlations observed for adiponectin in introduction rather than discussion

2. Authors shall profile HMW form of adiponectin in additional to total adiponectin. As authors already have serum samples, that shall not be the problem.

3. Fibrosan shall be excluded from the title. Authors had not actually evaluated fibroscan in their results

4. In their discussion portion of the manuscript, the authors claim to, “Investigate the role of serum adiponectin in determining liver fibrosis and hepatic dysfunction”. The authors fail to address this in their study. The only evidence the authors provide is a correlation analysis between adiponectin levels and liver fibrosis and hepatic dysfunction. The authors should include and propose a mechanism for the “role” if such exists. This is a strong statement with no data to support this claim. This sentence should be restructured to convey the appropriate relationship buttressed by their data.

Other specific comments:
1) age of BA patients needs to be mentioned in the abstract.

2) Background: adiponectin cannot be marked as “novel”, it is “novel” for BA but in for other liver disease.

3) Materials and methods: Caster scores: sensitivity for significant fibrosis of 67% is not so great, authors needs to mention it as one of the limitation of the study.

4) Serum preparation: was serum separated before freezing? If it was done otherwise, results would be severely distorted.

5) Use of T-test is incorrect, one should use only non-parametric (Mann-Whitney) tests for group comparisons, when any group is less than 30 and no tests for normal distribution of the values is made. Please, recalculate

6) Results: BMIs of the BA patients and controls needs to be reported, as adiponectin is known to be decreased in lean and very lean patients (does any BA patients have

7) Serum separation protocol used to obtain their serum for ELISA assays needs to be described. Were serum samples all fasting? This type information is vital for the authors to include for reasons of reproducibility

8) The authors have analyzed and reported their ELISA data appropriately. They have included all p-values and adhered to relevant standards for reporting and analyzing data.

9) The authors often use past tense in their writing which in some cases needs to be corrected to present tense.

Level of interest: An article of importance in its field

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

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests