Reviewer’s report

Title: Prognostic Impact of the Ratio of the Main Pulmonary Artery to that of the Aorta on Chest Computed Tomography in Patients with Idiopathic Pulmonary Fibrosis

Version: 0 Date: 08 Dec 2018

Reviewer: Caio dos Santos Fernandes

Reviewer’s report:

It is an interesting studies, but I think the pulmonary hypertension aspect of the main finding has been neglected. I also have some queries

1) Page 3, line 16. The statement in incorrect. Right Heart catheterization is not associated with several complications. In fact, Hoeper et. al have shown that the risk of complications due to RHC in an experienced center is 1.1% (J Am Coll Cardiol. 2006 Dec 19;48(12):2546-52). The text suggest otherwise. Please re-phrase.

2) Discussion about the values of pulmonary pressure identified are virtually absent from the discussion. However, the main finding of the study should co-relate with a difference in pulmonary pressure, but apparently, it does not (at least from the values identified by echo). RVP measured by echo are quite similar from both groups (37 vs 43, table 2). Is this finding just because echo is not good enough to evaluate PH in interstitial lung disease, or the mPA/Ao ratio comprises and reflects other variables than merely the pulmonary pressure? What are the authors impressions? Was specific PH therapy implemented to any patient? If so, did the therapy impact in outcome? Did the patients that received (or required) specific PH therapy had a higher mPA/Ao ratio?

3) No information was provided about gas exchange. Was oxygenation levels different from both populations? This could co-relate with the eventual presence of PH. What about CO2 levels?

4) 58 patients of the study underwent lung transplantation. Probably, these patients underwent right heart catheterization prior to the transplant, since it is a pre-op requirement. It would be interesting to analyze the mean pulmonary pressure of this subgroup and its co-relation to mPA/Ao ratio.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

**Are the conclusions drawn adequately supported by the data shown?**
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Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
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Acceptable

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