Author's response to reviews

Title: Several clinical interests regarding lung volume reduction surgery for severe emphysema: meta-analysis and systematic review of randomized controlled trials

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Author's response to reviews: see over
1. The title thought attractive is not justified and is not withheld in the manuscript. The value of LVRS in Heterogenous emphysema has been well published. There are various aspects of benefits of LVRS which are published hence calling them controversial may not be justified.

Response: Thank you for your comments. Eight RCTs published from 1999 to 2010 were identified and synthesized to compare the efficacy and safety of LVRS vs conservative medical therapy. One RCT regarding comparison of MS and VATS was obtained. And three RCTs were available evaluating clinical efficacy of using bovine pericardium for buttressing, autologous fibrin sealant and BioGlue, respectively. Therefore, we have replaced the title as “Several clinical interests regarding lung volume reduction surgery for severe emphysema: meta-analysis and systematic review of randomized controlled trials”.

2. The Bioglue vs Buttress was a pilot phase RCT and used Median sternotomy yet you are making a recommendation of VATS with Bioglue (the company currently doesn’t have a VATS applicator for BioGlue).

Response: Thank you very much. Indeed, the reference was a pilot and interesting RCT and used median sternotomy. Actually, we want to address the clinical values of Bioglu in LVRS (via either median sternotomy or VATS) instead of only VATS. Recently, a new rigid applicator tip(CryoLife Inc. Kennesaw, U.S.A), 34 cm in length, is developed and enables precise delivery in minimally invasive surgeries (please find it in the following website http://phx.corporate-ir.net/phoenix.zhtml?c=80253&p=irol-newsArticle&ID=941772&highlight=). Additionally, we think Bioglu will be useful in LVRS not only via median sternotomy but also VATS. We add the point into the revision.

3. Abbrevations: PaO2: partial pressure of arterial oxygen. PaCo2 should be partial pressure of Arterial CO2

Introduction: Please remove An Obvious
Clarify that mostly conservative treatment is used rather than always please.

Response: We revise our manuscript according to your comments. Thank you very much.

4. Do you mean reduce heterogenicity when you satte inhomogeneity?
Response: We mean “reducing heterogeneity” when we state “inhomogeneity”. And we replace “inhomogeneity” by “heterogeneity” in the revision.

5. Do you mean Pneumectomy or pneumonectomy as both have completely different meanings

Response: Thank you for your question. Actually, we think the meanings of the two terms are very similar. However, in pubmed, the Mesh data only include “pneumonectomy”.

6. trail quality score should read trial quality score

Response: We revise our manuscript according to your correction. Thank you very much.

7. The authors state the different adjuncts used but haven’t referenced them Is this a cross reference?

Response: we cite three literatures in the revision.

8. The RCT comparing Fibrin sealant did not compare it against buttress it was bare staples Vs fibrin sealant

Response: Thank you very much for your comment. Indeed, the RCT did not compare fibrin sealant against buttressing. Actually, the authors, Moser et al, presented their opinions in the discussion of the RCT that “buttressing adjuncts might result in the extensive inflammatory reaction with formation of dense adhesions, which enhances difficulty of lung transplantation after LVRS”. And they also pointed out in the article that autologous fibrin sealant overcomes the potential infective and antigenic risk in comparison to using pooled human fibrinogen or exogenous thrombin, especially of bovine origin. We depict the section in the revision detailedly.

6. I would recommend the authors consider and incorporate the following manuscript


It would be useful to browse the following references as they all support the value of LVRS in valuous forms


Response: Thank you very much for these excellent comments. In the 3.5 section of the revision, we add the followings as:

In 2000, a RCT (Stammberger U, Klepetko W, Stamatis G, Hamacher J, Schmid RA, Wisser W, Hillerjan L, Weder W: Buttressing the staple line in lung volume reduction surgery: a randomized three-center study. Ann Thorac Surg) was conducted in 65 patients underwent bilateral lung volume reduction surgery by VATS, either without (control group) or with bovine pericardium for buttressing. The RCT demonstrated using bovine pericardium significantly decrease the median air leak time compared with control group (0.0 day [range, 0 to 28 days versus 4 days [range, 0 to 27 days); P <0.001), as well as median drainage time (5 days [range, 1 to 35 days] versus 7.5 days [range, 2 to 29 days); P=0.045).

Besides, in the discussion of the revision, we add the followings as:

Despite the different assessment criteria of the seven included RCTs, all the studies concluded that LVRS can improve QOL efficaciously. Additionally, Krachman et al.( Krachman SL, Chatila W, Martin UJ,