Author's response to reviews

Title: Percutaneous evacuation of diffuse pulmonary interstitial emphysema by lung puncture in an extremely low birth weight infant: a case report

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Author's response to reviews: see over
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Professor Michael Kidd AM
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Dear Prof. Kidd:

Thank you for your letter of May 28, 2012 regarding our manuscript MS8103190776769792; Percutaneous evacuation of diffuse pulmonary interstitial emphysema by lung puncture in an extremely low birth weight infant. We appreciate the opportunity to respond to the reviewers' thoughtful and helpful comments. Below is our response to the reviewers' comments.

Reviewer's comment: The authors demonstrate the efficacy of lung puncture as the treatment for PIE in preterm neonates. This case of interest to the neonatologist in situations where the neonates is critically sick and intervention such as single lung ventilation and/or surgical intervention will take too much time or potentially be harmful in an unstable situation.

The potential explanation offered by the authors is unlikely for the results they had obtained. Despite interconnections within the small cysts in PIE as stated by the authors they cannot be drained by as single puncture which then would make this the method of choice of treating PIE. As with the sudden deterioration, clinical symptoms suggestive of tension pneumothorax, removal of air by single site puncture and quick response points towards a giant emphysema or a large bullae. Also as observed in the third x-ray the small cysts characteristic of PIE remain after the drainage has been performed also is an evidence against draining PIE cysts by single puncture. It would be useful for the readers to consider giant bullae in sudden change in clinical condition and these cases can be helped by the method described by the authors and cautions the readers for using this method in all cases of PIE.
**Response:** I’m sorry that the quality of figures in the manuscript was so poor. We added new figures and improved the resolution of all figures in the manuscript to better demonstrate the progression of PIE.

In our case, PIE gradually progressed to diffuse pseudocystic changes in the whole right lung (new Fig.1 & 2), especially in the right lower lung (new Fig.3), resulting in the same pathophysiologic condition as a tension pneumothorax.

In new Fig. 1 and 2, PIE not only in the right lower lung but also in the right upper or middle lung is shown to have progressed. As you pointed out, PIE remained slightly in new Fig. 5, but after therapeutic lung puncture, PIE improved in whole right lung field compared with that seen in new Fig. 2, even though puncturing was performed in only one location in the right lower lung.


In the light of these anatomical features, our results suggest that PIE accumulates within the lymphatic system of the lung in preterm infants and shows interconnection between PIE in the immature lung, and single site lung puncture is an effective strategy for diffuse PIE.

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We have followed all instructions for authors and the manuscript checklist again and revised our manuscript document by using the track changes mode in MS Word. The manuscript has been carefully reviewed by an experienced editor whose first language is English again. Below are our major revisions.

- added the patient’s age and ethnicity both in the abstract and in the case presentation sections.
- added some sentences on page 5 to better explain the progression of PIE.
• changed a sentence partially on page 8.
• added figure legends for new Fig. 1 and 2.
• add Fig. 1 and 2.
• changed the figure numbers as follows: figure 1→figure 3, figure 2→figure 4, figure 3→figure 5

Thank you for considering this paper for publication. We greatly appreciate the reviewer's comments and suggestions.

Sincerely,
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