

Dear Dr. Wang:

Thank you for your letter and for the reviewer's comments concerning our manuscript entitled "Use of a modified tracheal tube in a child with traumatic bronchial rupture: A case report" (Manuscript NO:68990). Those comments are all valuable, constructive and very helpful for revising and improving our researches.

We have studied reviewer's comments carefully and have made revision which marked in red in the paper. We have tried our best to revise our manuscript according to the comments.

The main corrections in the paper and the responds to the reviewer's comments are as following:

Responds to the reviewer's comments:

Reviewer #1:

Thank you for taking your valuable time to review on my manuscript.

Reviewer #2:

1. Response to comment: Considering the classical techniques needed were not available however, right upper lobectomy was done. What is meant by classical techniques, right lobectomy may have been performed using double lumen tube ? It must have been available.

Response: The classical techniques in ventilation include double-lumen tubes(DLTs), bronchial blockers(BB), single-lumen endobronchial tubes, extracorporeal membrane oxygenation(ECMO) and high frequency ventilation.

It is really true as reviewer suggested that right lobectomy may have been performed using double lumen tube. However, according to the literature, in children over 6-8 years of age, double lumen tubes can be used to perform selective bronchial intubation. But for a 3-year-old boy presented, suitable double lumen tube is unavailable because the size of bronchi is too small. Besides, the techniques are complex and require adequate knowledge,

technical skills and special tubes, especially in infants and younger children, so the techniques are unavailable in our hospital.

In this case, eleven days after admission, the modified tracheal tube was withdrawn to the trachea. Right lobectomy was performed using the modified tube intubated in the trachea.

2. Response to comment: What were exact oxygenation parameters- a) when normal tube was used, b) when modified tube was used ?

Response: We have added this part according to the reviewer's suggestion. Pulse oxygen saturation was 60% when normal tube was used. When modified tube was used, Pulse oxygen saturation improved from 60% to 90%.

3. Response to comment: Patient was there for 12 days prior to surgery, any attempt made to switch to proper double lumen tube. If yes or No, explain why.

Response: No. As reviewer suggested that double lumen tube can be used to perform selective bronchial intubation, but we didn't attempt to switch the double lumen tube. The reasons are as following. For a 3-year-old boy presented, suitable double lumen tube is unavailable because the size of bronchi is too small. And selective bronchial intubation requires adequate knowledge and technical skills, which are also unavailable in our hospital. Besides, after using this improved method, the ventilation was good and effective, so no other method was used.

4. Response to comment: What type of intubation it was, Was tracheostomy considered at any point ?

Response: a) It was endobronchial intubation. b) Tracheostomy was not considered. The reasons are as following. Firstly, persistent pneumothorax was observed with insertion of the chest tube, and made his respiratory distress worsen. Pneumothorax can not be solved by tracheotomy. Besides, the airway

can be blocked by bleeding. Therefore, a patent airway and adequate ventilation can not be provided by tracheotomy.

5. Response to comment: The hole made in the tube and as per figure 3, there appears no proximal control, the air would have leaked outside also. How this was managed ? or Adequate ventilation and expansion of left lung was being done- How this was monitored & confirmed ?

Response: a) The incision in the tube was near the carina, and the left lung was easily ventilated through this incision. Following successful intubation, the tube was connected to the ventilator. b) Ventilation was evaluated by monitoring pulmonary signs, chest X-ray and arterial blood gas analysis. The details are shown in page 9 line 10-14.

6. Response to comment: Major chest related issues within 3 months of stay to be added.

Response: I have supplemented the relevant chest conditions in three months (page 10 paragraph 1). The details are as following. Following surgical repair, the patient was weaned from the ventilator and successfully extubated on the 14th day, and given O₂ therapy via simple O₂ mask with 3 litre per minute. Nineteen days after admission, the child was transferred from PICU to neurosurgical department. He continued to accept mask O₂ therapy (oxygen flow 3L/ min). Pulse oxygen saturation was 97%. A follow-up chest radiograph showed good recovery (Figure 1D). Twenty-six days after admission, the oxygen therapy was stopped and pulse oxygen saturation was stable(>97%). Three months after admission, he was discharged from hospital.

6. Response to comment: Rather than ECMO, authors can add examples of such modifications of ET in other conditions and scenarios, as mentioned in the literature, which have been life saving.

Response: After this child was successfully treated, another child whose right

bronchus was compressed by mediastinal tumor was also successfully treated with this method.

Special thanks to you for your good and constructive comments again.

We would like to express our great appreciation to you and reviewers for comments on our paper. We look forward to hearing from you regarding our submission. We would be glad to respond to any further questions and comments that you may have.

Thank you and best regards.

Yours sincerely,

Qi-Meng Fan, Wei-Guo Yang