

**AUTHOR'S REPLY**

These are important, interesting and expected comments from a surgical unit. We offer following clarifications:

1. Our study was not a head to head comparison between surgical and conservative treatment of empyema thoracis in pediatric patients. There are very few studies that compare various treatment modalities (repeated thoracocentesis, chest tube drainage alone, chest tube drainage with fibrinolytics, VATS and thoracotomy) used for treating empyema. The objective of our study was to evaluate whether chest tube drainage alone can be an effective method of treating empyema. In a resource poor setting, no one should be denied the benefit of effective chest tube drainage. Patients should not be looking for a trained pediatric or thoracic surgeon instead of getting a chest tube put-in early. 'Families spending all their resources on consultation' can be avoided if timely drainage is offered.
2. Many studies support that pleural healing is very good in children; one recent publication [1] concludes that though MRI may show pleural scarring, irrespective of modality of treatment, the lung functions are not affected in long run. In an earlier study [2] done in patients of empyema treated with chest tube drainage, pleural thickening was present in many but ultimately all had normal lung functions.
3. It is true that children had to stay for two weeks to complete intravenous antibiotics; children with bronchopleural fistula had to stay longer. But surgical intervention is not cheaper unless offered by a public hospital free-of-cost. In a study on cost of various modalities used for empyema [3], cost of VATS was

much more than intercostal drainage along with fibrinolytics. Many of these children are high risk and would require a certain degree of competence, available only in few institutes.

4. We do not get CT chest done in every case of empyema because of the radiation risk. Unless it is clinically necessary or if surgery is being contemplated, CT chest is best avoided.
5. It is appreciable that the unit concerned has published a large series of cases of thoracotomy in empyema thoracis, We agree that it may be needed in some cases but surgical intervention in all cases of empyema cannot be the standard of care. A recent retrospective study [4] concluded that it is debatable whether VATS reduces the length of stay of children with empyema and suggested that chest tube drainage should remain the primary mode of therapy.

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