Author’s response to reviews

Title: A case of lethal spontaneous massive hemothorax in a patient with neurofibromatosis 1

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Author’s response to reviews: see over
we hereby submit a revised version of the manuscript. We have made substantial changes which are marked coloured and underlined in the text. Furthermore, a native speaker corrected the manuscript. We hope it now meets the requirements of the reviewer and the Journal. Please find a point-by-point description of the changes made below.

We thank the editors for considering the manuscript for publication in the Journal of Cardiothoracic Surgery.

Kind regards,

Luisa Zacarias Föhrding
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Version:
3

Date:
30.09.2014
Reviewer's report

Title:
A case of lethal spontaneous massive hemothorax in a patient with neurofibromatosis 1

Date:
17 June 2014

Reviewer:
Jean-Philippe Berthet

Reviewer's report:
Background:
The background should more focus the problem: Spontaneous hemothorax in a patient with an history of meningoele and vasculopathy. The author should underline the specificity of this case comparatively to already published litterature: diagnostic issue? Management issue? Will they give us any new "lesson" to learn?
In this section, please delete the incomplete review of the possible associated lesions in NF1.
We have rewritten the background part and deleted this part according to the reviewer’s recommendation.

Case presentation:
Case reports should include only relevant findings from history.
We deleted the part of the medical history that does not relate to the case (breast cancer) and included only the relevant findings of the known thoracic meningocele and thoracic scoliosis operation.

Figure 1: To illustrate the mediastinal shift, the black arrows should show the left side of the trachea.
We updated the figure accordingly.

Figure 2: should be limited to the upper CTscan view at different time points (At the time of IV contrast injection and delayed).
We updated the figure accordingly.

Description should be more accurate: delay between initial symptoms and admission, delay between admission and diagnostic. Please delete "following hours".
We specified the chronology of events in the manuscript.

Please explain the reasons for orotracheal (?) intubation: respiratory distress?, hemorrhagic shock?
The patient was intubated by orotracheal intubation. The reason for the intubation was an imminent cardiorespiratory arrest due to hemorrhagic shock. We clarified that in the manuscript.

Please explain the reasons for not performing a thoracic drainage just after the
chest x-ray? An increased mediastinal shift had maybe participated in the shock. The x-ray was performed by the outside hospital and we could not clarify why a thoracic drainage had not been performed immediately, rather than 2h 20mins after the initial x-ray as was the case.

"thoracic drainage": What drain?, where?, how much blood? Upon arrival at our institution, one 12 CH Monaldi drainage had already been installed, only 50ml of blood were observed in a drainage bottle.

"Emergency exploratory thoracotomy": Antero-lateral approach? Anterior approach? The surgical management should be more accurately described! An antero-lateral approach was chosen. We described the surgical management more accurately.

"A large hematoma": What is the definition of large? Accuracy please Our sentence “A large hematoma was evacuated” is in fact misleading. The hematoma rather exsanguinated spontaneously immediately following the thoracotomy. We rephrased that and hope we clarified that point in the manuscript.

CRC, TC, FFP...please delete this 3 abbreviations We followed the reviewer’s recommendation and deleted the abbreviations.

" we proceeded to an open cardiac massage through a median Sternotomy" You report that the patient underwent in the same operative time an antero-lateral approach to evacuate hemothorax and a median sternotomy to perform an open cardiac massage. Is it correct? Why did you perform a second thoracic approach? The cardiac massage was not possible through exploratory thoracotomy? Why performing a median sternotomy in a patient presenting with a bleeding meningocele located in the posterior mediastinum? This point is a major issue..please explain In fact, the patient underwent a thoracotomy and a sternotomy. The antero-lateral thoracotomy was used for exploration of the thorax and it was not possible to use this same approach for cardiac massage. We therefore used the second approach.

"Despite several sutures and" Suture of what? The sutures stemmed from attempts to oversew oozing points in the emergency situation.

"bleeding originated from a vascular abnormality of a thoracic vessel": Which thoracic vessel? What kind of abnormality? The authors did thought the patient had an aneurysm that was non visible on CTscan. We have specified the vessel (intercostal artery). Unfortunately, we could not discern the kind of abnormality in the autopsy. We can therefore only speculate based on the existing literature. We have made this point clearer in the manuscript.

Discussion The first step of the discussion is a compact abstract of the case and the result of the management. There is absolutely no use in reporting the clinical manifestations of the NF1 in general. We have implemented this point and have completely rewritten the discussion.
The discussion is too long. We have shortened the discussion from 555 to 363 words. Furthermore, we have considerably shortened the reference list.

You should focus on the issues related to an hemothorax in a patient with NF1. Diagnosis hypothesis
- How to make the diagnosis?
- When attempting endovascular management (embolization)?
- Is there a place for VATS in the initial management?
We have rewritten the discussion and hope that we satisfy the reviewer’s requests.

- What kind of thoracic approach do you recommend when the patient presented with hemodynamic shock and a posterior large meningocèle (or tumor, neurofibrom..etc) that was suspected to bleed?
We were forced to use the anterolateral approach due to reanimation conditions in the intensive care unit (i.e. not in the operation room). Under planned operation conditions one would probably favor the posterolateral extradural approach.