Author's response to reviews

Title: Absent cervical spine pedicle and associated congenital spinal abnormalities - a diagnostic trap in a setting of acute trauma: Case Report

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Author's response to reviews: see over
Dear Editors of BMC Medical Imaging,

As recommended, we have revised our manuscript according to the suggestions of your reviewers and have ensured that it confirms to your journal style. Please find the detailed point-by-point response to the concerns below. We look forward to your comments.

Sincerely,

Roman Guggenberger, MD
First Author

Reviewer 1:

1. *Would suggest working with an English editor and have them review the manuscript: “Patient history revealed untreated chronic neck pain since many years”*

   Response: We have made some style adjustments and consulted an English editor.

2. *Text is some what long and should be shortened for a case report.*

   Response: The text has been shortened where possible, but attempts were made to keep important features of this case in the manuscript. Especially the embryologic development of the spine was shortened, since the scope of this case report is on imaging appearance of this abnormality.

3. *The authors should be commended for establishing this abnormality as not resulting from an acute traumatic event.*

   Response: We have adapted our conclusion/discussion and emphasized the congenital nature of this pathology.

4. *An additional aspect which should be mentioned differentiating acute fractures from congenital pedicle/facet abnormalities is that there is no anterolithesis of the vertebral bodies with these congenital anomalies.*

   Response: This aspect has been incorporated in the description of the imaging appearance of this pathology.
Reviewer 2:

1. **The only point I would consider is to discuss in more depth the choice of first line imaging.** According to the Canadian C spine rules, the current gold standard for this kind of patient (high velocity/ ejection trauma) with neck pain (new or old does not matter) would have been CT scanning straight away, which would have spared everybody from this confusion.

Response: This is a very valuable comment. According to the Canadian C-Spine rules, in our case of a conscious and alert patient with a GCS score of 15 and mild neck pain but lack of clear-cut neurologic deficits an imaging study was indicated; arguably CT would have been the first choice, but due to occasional capacity shortages at our institution with several severe trauma patients at the same time conventional plain radiographs are often performed as a first radiography for less severe cases. The authors are totally aware of the confusion this might cause. Our case-report therefore wants to present such a pitfall and discuss the adequate or possible inadequate choice of an imaging study in such a setting of acute trauma.

2. **I would suggest giving some data on how many fractures are missed on plain c spine x-ray in general**

Response: We have cited a meta-analysis by Holmes JF et al. (Computed tomography versus plain radiography to screen for cervical spine injury: a meta-analysis. J Trauma 2005, 58(5):902-905) that gives some details about the sensitivity of plain radiographs and CT-imaging for cervical spine injuries. There is no clear-cut consensus in the literature though on what imaging study should be performed in which clinical situation.