Author's response to reviews

Title: Osteoarthrosis causing altered mental status - a case report

Authors:

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Version: 4 Date: 1 October 2014

Author's response to reviews: see over
Reviewer's report

Title: Osteoarthrosis causing altered mental status - a case report
Version: 3
Date: 16 September 2014
Reviewer: Alicja Sieminska

Which of the following best describes what type of case report this is?: Unexpected or unusual presentations of a disease
Has the case been reported coherently?: Yes
Is the case report authentic?: Yes
Is the case report ethical?: Yes
Is there any missing information that you think must be added before publication?: Yes
Is this case worth reporting?: Yes
Is the case report persuasive?: Yes
Does the case report have explanatory value?: Yes
Does the case report have diagnostic value?: Yes
Will the case report make a difference to clinical practice?: Yes
Is the anonymity of the patient protected?: Yes

Comments to authors:

Authors report a rare case of cervical spondylosis causing phrenic nerve root compression from foraminal narrowing at C3, C4 and C5 leading to lower motor neuron paralysis of the phrenic nerve with respiratory failure, in the absence of spinal cord involvement.
Authors point out that this rare and underreported cause of chronic respiratory acidosis and must be considered in the differential diagnosis of chronic hypoventilation, particularly in the elderly. They conclude that presented case illustrates how a simple arterial blood gas and calculation of the Alveolar-arterial oxygen (A-a) gradient can help in the workup of chronic respiratory acidosis by identifying causes of hypoventilation, which are associated with a normal diffusing lung capacity hereby a normal A-a gradient.

The manuscript reports very interesting case that serves for being presented to the wider circle of relevant specialists, including neurologists and pulmonologists. The manuscript is well-written and easy to follow. However, in my opinion, it is not quite clearly and sensibly arranged.

The Introduction should be revised so that it provides basic information on the symptoms of cervical spondylosis depending on the presence/absence of cervical spinal cord compression, as well as how often this condition is and which age category of patients affects most often. I suggest replacing the first paragraph of the Conclusion section to the Introduction section. Some references in the Introduction are also advised.

--The first paragraph of the Conclusion section has been moved to the Introduction section with references included in the introduction.

Information included into Discussion section can be viewed as a continuation of a case presentation and should be replaced to the Case Presentation section.

-The original discussion section has been moved to the Case Presentation section.

In the Discussion section, authors should rather comment their case and refer their comments to the available relevant literature. I suggest replacing the second and
the third paragraph of the Conclusion section to the Discussion section. The second and third paragraph of the conclusion section have been moved to the Discussion section.

In my opinion, only the last paragraph best fits the Conclusion section. Only the last paragraph has been left in the conclusion section as suggested. Moreover, this section might be extended by the comment that using A-a gradient assessment is much easier to do than diffusing lung capacity examination, which can be impossible to perform in patients with respiratory failure requiring ventilation. This has been added to the conclusion.

Minor revisions:
In the Case presentation section of the Abstract the term Alveolar-arterial oxygen gradient has been first mentioned, but only abbreviation “A-a gradient” has been provided. Please replace to this site the full term “Alveolar-arterial oxygen” that has been further used in the Conclusion section of the Abstract. The abbreviation has been expanded upon in the initial portion of case presentation.

I suggest adding somewhat on the altered mental status in patient, the symptom that has been stressed in the title of the manuscript, but further barely mentioned in the manuscript without clear linking it to a hypercapnic respiratory failure. We have added the emphasis on hypercapnea leading to altered mental status in the case presentation section in the first paragraph and fourth paragraph.

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Declaration of competing interests: I declare that I have no competing interests

Reviewer's report
Title: Osteoarthrosis causing altered mental status - a case report
Version: 3
Date: 17 August 2014
Reviewer: Richard Rison

Which of the following following best describes what type of case report this is?: Unexpected or unusual presentations of a disease
Has the case been reported coherently?: Yes
Is the case report authentic?: Yes
Is the case report ethical?: Yes
Is there any missing information that you think must be added before publication?: Yes
Is this case worth reporting?: Yes
Is the case report persuasive?: No
Does the case report have explanatory value?: Yes
Does the case report have diagnostic value?: Yes
Will the case report make a difference to clinical practice?: Yes
Is the anonymity of the patient protected?: Yes

Comments to authors:
1. Abstract: “Here we reports a rare case of cervical spondylosis causing phrenic…” should be:
“Here we report a rare case of cervical spondylosis causing phrenic…”
We apologize for the grammatical error that escaped our proof reading and have corrected it.

2. Were the authors able to exclude a diabetic phrenic neuropathy? (see below)
Answer below
3. The authors state the following: “The EMG revealed decreased amplitude in the phrenic nerves bilaterally and radiculopathy in the upper limbs, suggestive of nerve root compression at cervical foraminal level.” Technically the nerve conduction study shows the phrenic nerve amplitude and the electromyogram shown the MUAP’s. Please state more specifically what the EMG findings were that led you to conclude a radiculopathic process. Was a phrenic nerve conduction study done?
Answer to 2 and 3-Yes phrenic nerve conduction study was performed which showed markedly abnormal conduction suggestive of phrenic neuropathy. It was felt less likely that the neuropathy was related to diabetes given the neural foraminal compression and nerve impingement noted on MRI at C3-C5 although diabetic neuropathy potentially was a contributor to the neuropathy and we have clarified this in the text and added this to the discussion.

4. Was a full 3-limb EMG/NCS study done to exclude ALS?
Yes a full 3 limb EMG and nerve conduction study was done and showed no evidence of ALS and no fasciculations in the extremities.

5. Were other etiologies such as diabetic phrenic neuropathy (see above), diabetic CIDP, proximal MMNCB, myositis, and myasthenia considered?
Myositis was effectively ruled out with a negative CPK and aldolase and during EMG testing which was negative for a myopathic process. Myasthenia was also considered but the markedly abnormal EMG/NCS strongly suggested phrenic nerve compression or neuropathy and so this was felt to be less likely.

6. Consider adding and MRI of the cervical spine image and/or appropriate tracings of the NCS/EMG (if available).
The MRI was of poor quality due to motion artifact and was not suitable for publication. Unfortunately the EMG tracings are not recorded as part of our medical record and were discarded after the report was generated.

7. Consider adding the following reference:
http://www.ncbi.nlm.nih.gov/pubmed/21906870 as it shows how diabetes alone can cause bilateral phrenic neuropathies and diaphragmatic weakness.
We have added this reference

8. The discussion section should be expanded a little.
We have expanded the discussion and included the section on other potential causes of phrenic neuropathy.

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Declaration of competing interests:
I declare that I have no competing interests.