Reviewer's report

Title: Primary pyogenic spondylitis following kyphoplasty: a case report

Version: 3 Date: 23 August 2010

Reviewer: Cornelia Putz

Which of the following following best describes what type of case report this is?: An unexpected event in the course of observing or treating a patient

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:

(1) General comments
This case report by Schofer et al. addresses an important complication following kyphoplasty: primary pyogenic spondylitis with an accompanying incomplete paraplegia.

The authors conclude that if recurrent back pain after kyphoplasty occurs, spondylitis must be considered as a possible, but rare differential diagnosis.

(2) Revisions necessary for publication
• Case presentation, 1st paragraph:
The authors should clarify the administration of antibiotics during kyphoplasty and make the necessary changes within the manuscript.
They reported on administration of 2 g cefazolin during kyphoplasty, which constitutes a 1st generation cephalosporin.

Controversially, they mentioned in the 2nd paragraph of their discussion that “the pyogenic spondylitis was not prevented by a single perioperative prophylactic antibiotic administration using a first-generation cephalosporin.”

I would recommend to focus on the patients` comorbidities and the possible benefit of antibiotic cement in this single case.

- Case presentation, 3rd and 4th paragraph:
I would recommend adding more precise information about the dynamic of incomplete paraplegia.

The reader gets the impression that initially sensory incomplete paraplegia below L1 changed into motor incomplete paraplegia after conservative treatment (percutaneous drainage of the psoas abscess and antibiotic treatment). The authors should explain and discuss, why they did not perform primary laminectomy, decompression of the myelon and dorsal stabilization in a patient with spinal cord compression (MRI). As incomplete paraplegia goes along with neurogenic bladder and bowel dysfunction, the authors should also add this information and the outcome after 24 months.

Otherwise this case report is nice and informative and reminds spine surgeons that prophylactic antibiotic administration is a prerequisite in kyphoplasty. Antibiotic cement have to be discussed in single cases based on patients` disease in order to prevent pyogenic spondylitis.

Minor issues not for publication
- Abstract. Case presentation: please specify partial paralysis below L1 (I would propose to use sensory incomplete paraplegia below L1) instead of partial paralysis…
- Manuscript. Case presentation. 1st paragraph. “Medical examination and imaging with CT MRI” should be corrected into…… imaging (CT and MRI)
- Manuscript. Case presentation. 2nd paragraph. “…..hypoaesthesia below L1…”
- Please add information on sensory examination (hyposensibility and hypoaesthesia…)
- Manuscript. Case presentation. 3rd paragraph….the patient was taken to the operating theatre….should be changed into proper english.
- Discussion. 1st paragraph. “….symptomatic compression fractures, and it usually..

Please avoid usually.
“….Up to the end of the third quarter 2008, with increasing tendencies…”the sentence is not clear.
The complication rate is comparatively low after kyphoplasty. Please avoid
additional words like comparatively if no comparison is given.

“The same holds true....” The sentence is not clear.

**Quality of written English:** Needs some language corrections before being published

**Declaration of competing interests:**

I declare that I have no competing interests.