Reviewer's report

Title: A displaced stress fracture of the femoral neck in an adolescent female distance runner with female athlete triad: a case report

Version: 1 Date: 10 December 2009

Reviewer number: 4

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The authors describe a case of “a stress fracture with displacement of the femoral neck” which is a rare entity. Overall the manuscript is well written with a sufficient follow-up period of 2 years. The style and content are also acceptable. However, there are a few issues to be addressed. I would like the authors to revise the manuscript with additional description and information (data) as follows:

1. The figure number should be corrected. Figure 3 and 4 are reversed. Figure 3 is MRI, and Figure 4 is scintigraphy. The figure number which was submitted appears to be in an opposite order.

2. The authors described a triad of young female long-distance runner: amenorrhea, eating disorder and osteoporosis. However, in this case report, the runner did a diet control only for 2 weeks prior to the running race. I would like to know more in details about the content of diet and her p.o. intake on her regular basis.

Regarding osteoporosis, there was no abnormality in the reduction of the BMD (bone mineral density) of her calcaneal bone at 6 months postoperatively. Can the authors provide any other data? How about preoperative or early post-injury BMD and or bone metabolism markers?

It would be preferable if there would have been data of bone density reduction.

3. In Discussion, the authors should review more previous published cases by better literature search. Were they able to find and review a significant number of cases (in spite of a relatively rare type of fracture)?

How about the prognosis? Patients with fracture with displacement are cured eventually? Have they been back to their original sport activities?

4. It is mentioned that a female long-distance runner who has a pain around the hip joint should have tests of gonadotropins and sex hormones by gynecologists. If the low hormone level is detected and a hormone replacement treatment is provided, such a stress fracture as the present case can be preventable? There seems to be no evidence of such successful prevention of fracture by hormonal treatment as far as I am aware. I would like the authors to make comments in this regard (or to provide us with a better evidence).
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**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable