Reviewer's report

Title: A case of osteosarcoma in the distal femur two years after an ipsilateral femoral shaft fracture. Coincidence? A case report

Version: 2 Date: 12 August 2010

Reviewer: Verity A. Currall

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?: 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:

General Comments
I think this case report does have a message, but it needs to be more clearly argued in the discussion and then confirmed in the conclusion.

Revisions Necessary Before Publication
1. Radiography did contribute to the diagnosis, when the patient presented with the pathological fracture. Please remove the sentence from the abstract saying it did not.

2. Which company manufactured the unreamed femoral nail?

3. It is stated that the diagnosis was confirmed by biopsy – was this from the
distal femur alone, or from the fracture site in the midshaft also? The exact histology may have some bearing on the link between the two lesions, as skip lesions tend to be less differentiated than the primary tumour.

4. The discussion is, in general, fairly disorganised and, at times, argues against itself. This needs to be addressed. For example:

“When the diagnosis of osteosarcoma was made, our patient had two lesions in the same bone. What is the connection between them – which lesion is the primary?

Evidence for the fracture site lesion being the primary…

Evidence for the distal lesion being the primary…”

5. In the conclusion: “This trauma mechanism is absolutely inadequate for the femoral shaft fracture presented, therefore we think a primary tumor existed at the site of the fracture”. Where is the evidence for this in the Discussion? I suggest Ramisetty et al (2005) Injury 36(5):622-6) as a starting point.

6. You need to go into more detail for the possible mechanism of connection between the two lesions. For example:

• skip lesions are more commonly proximal to the primary
• even with an unreamed nail, it is possible that the primary site was the distal femur and the tumour was spread proximally by the surgery
• surgery and trauma may have a part to play in the spread of cancer (see Currall and Dixon (2008) Synovial Metastasis: An Unusual Cause of Pain After Total Knee Arthroplasty. J Arthroplasty 23(4) 631-6)

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