Reviewer's report

Title: Avulsion fracture of the lesser tuberosity in a tennis player: A case report

Version: 2 Date: 3 September 2011

Reviewer number: 3

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Comments to the Author

This manuscript reported a rare case of an adolescent tennis player with isolated avulsion fracture of the lesser tuberosity of the right shoulder. The Authors report that it occurred without obvious trauma associated with repeated tennis strokes.

Major Compulsory Revisions

Isolated avulsion fractures of the lesser tuberosity in adolescents are rare injuries. The mechanism of injury is acute forced external rotation with the arm in abduction, which has been reported in children. Previous reports showed large bony avulsions, on which the subscapularis tendon inserted.

This case reports an isolated avulsion fracture of the lesser tuberosity that presents distinctly different from the other reports. I think the paper should be re-written accordingly, to emphasize the discrepancy with other reports.

1. It cannot be neglected that the bony fragment is an avulsion fracture from lesser tuberosity or free bony fragment entrapped by surrounding connective tissues.

2. As there is evidence that the most isolated avulsion fractures of the lesser tuberosity are caused by fall or extremely strenuous sport activities, the Authors should discuss this as an additional possible factor to explain the discrepancy between their study and the previous studies, especially about the history and mechanism of injury, and the size and shape of the bony fragment. In the absence of this information, the Authors cannot mention that “avulsion fracture of the lesser tuberosity caused by repeated tennis strokes, without a true trauma.”

3. It would be helpful if the Authors showed more slices of conventional CT scan, not 3D-CT, including the bony fragment and the abnormal feature on the lesser tuberosity, which convinced to know where the bony fragment had come from.

4. More detailed information about operative findings, including the insertion of the subscapularis tendon or the relation between the tendon and a bone fragment, should be needed, to clarify the pathological condition such as impingement, malunion, or muscle weakness.
Level of interest: An article of limited interest

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