Reviewer’s report

Title: Physiopathology of intratendinous calcific deposition

Version: 1 Date: 28 April 2012

Reviewer: Geraldine McCarthy

Reviewer’s report:

This is a review of the physiopathology of intratendinous calcific deposition.

In the first instance, the authors have published a review recently (Sports Med Arthrosc. 2011 Sep;19(3):237-43. Calcific tendinopathy of the rotator cuff tendons. Oliva F, Via AG, Maffulli N.) I do not have access to the full text.

I would like to know why the current review represents an advance on the review published in September 2011 on the same subject. (major compulsory revision)

Abstract:

Refers to decreased mobility and motility – are they not the same thing?
Suggest remove ‘Rather than formed by precipitation of inorganic ions’ (minor)

Introduction: Should state purpose of review. (Major revision)

Authors state (referring to ref 6 from 1976) that process of crystal deposition takes several months – this is is speculation and should be so stated. (minor)

Also, RC tendons needs to be defined viz. rotator cuff (minor)

Contribution of BMP and TGs are mentioned in the same sentence as genes – these should be separated as this is confusing. (minor)

Histology:

First sentence: typo, ‘form RC’ tendons – should be from.

The authors discuss the work of Uhthoff et al including the relationship to matrix vesicles. The work by Gohr et al is referred to much later in the manuscript (ref 75) but could be introduced at this point as it is highly relevant to the discussion of the formative phase. It would be worth referring to the work of Shon et al. (Shon W, Folpe AL Tenosynovitis with psammomatous calcification: a poorly recognized pseudotumor related to repetitive tendinous injury. Am J Surg Pathol. 2010 Jun;34(6):892-5) where an unusual varient of calcific tendonitis, which the authors propose as a distinct entity, is described in detail.

Discussion:

Chiou et al have recently shown correlation of variations in morphology of deposited crystals with clinical findings. (Rheumatology (Oxford). 2010 Mar;49(3):548-55. Epub 2009 Dec 23. Correlations among mineral components,
progressive calcification process and clinical symptoms of calcific tendonitis (Chiou HJ, Hung SC, Lin SY, Wei YS, Li MJ). The authors refer to this in passing giving more emphasis to older studies. The more recent work should be emphasized. (Major revision)

Conclusions:

The authors state that apatite is ‘deposited at first into matrix vesicles which seem to be acellular”. This statement does not reflect the potential active role of the matrix vesicle in the mineralization process. This role has been noted in mineralization of cartilage also. (major revision)

There are 4 figures, all radiographs. Figs 3 and 4 while interesting do not hugely add to the statements to which they are linked. (Minor)

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests