Reviewer’s report

Title: A cadaveric and sonographic study of the morphology of the tibialis anterior tendon – a proposal for a new classification

Version: 0 Date: 10 Dec 2018

Reviewer: Matthew Fitzpatrick

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Line 50 - Orthesis - needs to be Orthosis

There is, in this paragraph - form line 49, limited comments around conservative management and the author does go very quickly to surgical management - I would allude to a little more the options to conservatively manage these clinical presentations - with the moving around of the 'rehabilitation' references. The author alludes to the need (line 57) to have "detailed anatomical knowledge" - which I accept is important but does not expand as to why. This is again not giving any back ground to the clinical aspects / implications for the disease type - it would help to link in the biomechanical considerations as this then leads the reader to consider the relevance of the varied insertional placements (the Types) as their location, and therefore mechanical advantage or not, will have an impact on what may happen to them when 'injured' and then their rehabilitation?

Line 90 and 104 there are BLACK BOXES - not sure what these are covered or not - or if this is a formatting issue?

In the Sonographic Study section there is no information on the M/F split which is outlined in the anatomic section - surely there would need to be clarity of both or absence of both for consistency and relevance? Also was the presence of Hallux valgus an exclusion criteria in those who have US done?

There is not reference to the training of the individual

Were all the measurements by the same person

Where the two repeated measurements done at the same time

Consideration of two US users may have added some validity to the results? - but the lack of this approach may be good to note as either a deliberate decision or failing in the design?

Also - why not US the cadaver - then compare the findings on US and then the anatomic dissection - this would have been a really interesting comparative option?

Line 172 - 'propose' - may read better with 'proposeD'
There is an assumption / assertion that the findings / results are helpful in 'planning surgery' but what surgery

Is this for direct treatment of the TAT when damaged, or is it to appreciate the placement variation when undertaking other surgery in the area?

Is this related to grafting in - the mention of auto and allograft suitability was appreciated but what I felt this paper lacked was the application of the findings or the next step in the research and how this would then be taken forward - what is the applicable benefit is always the question I ask when there is an alluded position in the paper of clinical use ? how practical does the results provided actually play out in the real world?

It is an interesting paper, there are areas to expand and elaborate on I think - as this will take it not just to the pure research focus but how then this knowledge can inform the 'clinician' when next face with a patient with pathology in this area.

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