

1 **Re: Editorial Commentary: Thank you, Thank you, Thank You...for Demonstrating**
2 **Histologic Evidence of Shoulder Bicipital Tunnel Disease in the Absence of Magnetic**
3 **Resonance Imaging Findings.**

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1 Dear Editor,

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3 We read the editorial comment by Dr Taylor with great interest [1] and we agree that the
4 recent publication from Nuelle et al. [2] entitled ‘Radiologic and Histologic Evaluation of the
5 Proximal Bicep Pathology in Patients With Chronic Biceps Tendinopathy Undergoing Open
6 Subpectoral Biceps Tenodesis’ furthers the notion that the decision to perform surgery for
7 long head of the biceps tendon (LHBT) pathology should not rely exclusively on imaging, or
8 indeed on the macroscopic appearance of the tendon intra-operatively.

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10 Our clinical experience mirrors the observations made by Nuelle et al, that in patients with
11 chronic LHB tendinopathy, who undergo open subpectoral tenodesis, pre-operative MRI and
12 intraoperative assessment often do not show significant abnormalities. However, we do not
13 agree with the statement by Dr Taylor that “direct visualisation of the bicipital tunnel is not
14 possible”. Previously Bhatia et al. [3] reported the ability to perform biceps tenoscopy to
15 visualise the intra-articular and intertubercular regions of the tendon. We have also
16 demonstrated that biceps tenoscopy can be successful in allowing full visualisation of the
17 extra-articular LHB [4]. However, because of our experience, confirmed by Nuelle et al, that
18 macroscopic appearances of the LHBT don’t correlate with symptoms, we do not advocate
19 biceps tenoscopy routinely. Instead, we agree that the decision on LHB management should
20 be made pre-operatively.

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22 However, pre-operative assessment of LHB pathology has its challenges. In 2015 we reported
23 that the sensitivity and specificity data reported for many imaging studies and physical
24 examination tests was invalid because of the reliance on arthroscopy as the gold standard [5].

25 We have previously advocated that arthroscopy should no longer be considered the gold

26 standard because several authors, including ourselves, have demonstrated that standard
27 arthroscopic techniques fail to adequately visualise the LHBT. In our systematic review we
28 reported that the visualisation of the overall tendon length in these studies varied between
29 only 34% to 48%. Therefore a “normal” arthroscopy does not exclude pathology. This is
30 further evidenced by Gilmer et al. and Murthi et al. who have reported that arthroscopic
31 assessment missed LHBT pathology in between 33% and 51% of cases when compared
32 to open assessment [6, 7]. Although the “3-Pack” examination advocated by Dr Taylor [8]
33 has the advantage of sensitivity and specificity data derived from visualisation from the
34 subdeltoid arthroscopic portal, which provides greater visualisation of the overall tendon
35 length compared to standard posterior portal viewing, it still remains a limitation that the
36 macroscopic appearances of the tendon do not necessarily correlate with patient symptoms.

37 In closing we would like to state that we agree with Dr Taylor [1] with respect to the message
38 that the decision to perform tenotomy or tenodesis should be made pre-operatively. In our
39 opinion this should be based on the patients’ symptoms and by holding an appropriate index
40 of suspicion for pathology based on the presence of concomitant pathologies. We do not
41 discredit physical examination tests and imaging modalities because important roles have
42 been defined for each but we do feel that the limitations of each must be highlighted and
43 clearly understood in order to avoid the high rate of missed diagnoses of LHBT pathology.
44 We also feel that it is particularly important to emphasise that a “normal” arthroscopy, even
45 with advanced arthroscopic techniques such as biceps tenoscopy, does not exclude important
46 symptomatic pathology because macroscopic changes are not always present.

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