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Correspondence

Reply to Misirlioglu et al: "Periscapular muscle ultrasound as a diagnostic aid in scapular winging secondary to long thoracic nerve lesion"

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We would like to thank Misirlioglu and colleagues for their correspondence concerning periscapular ultrasound (US) as a diagnostic aid in scapular winging secondary to long thoracic nerve (LTN) lesion [1]. Misirlioglu's team, along with Coraci's [2], suggest nerve US as an alternative to MRI to show denervation of LTN. Misirlioglu et al. add to the previous conclusions, along with Krzesniak-Swinarska [3], the contribution of muscle – instead of nerve – US to complete the evaluation, by showing muscle impairment with increased echo-intensity associated to decrease muscle bulk in denervated muscles. Those signs can appear 2 to 3 weeks after nerve transection in experimental studies [4]. While increased muscle echo-intensity is not specific of denervation, the association with decrease of muscle bulk is quite specific [3]. It is indeed interesting to develop non-invasive, available and unexpensive imaging technics to help the diagnostic of scapular winging, which can be sometimes difficult and often made late, or mistaken for radiculopathy or other shoulder diseases. We agree with the authors regarding to US use in that particular syndrome. Nevertheless, it seems necessary to make a distinction between the different causes of scapular winging. Indeed, while Krzesniak-Swinarska et al. based their findings on cases of denervation (whether they are of traumatic or idiopathic etiology) [3], Coraci et al. described a case of traumatic injury of long thoracic nerve [2], while our study focused only on idiopathic cases [5]. It seems worthwhile to compare muscle and nerve US of traumatic cases of scapular winging and idiopathic cases. Likewise, specific nerve MRI sequences, focusing on the long thoracic nerve, rather than muscle MRI focusing on the serratus anterior muscle, could be used in future research. And, as scapular winging can also commonly be explained by spinal accessory nerve (trapezius muscle), suprascapular nerve (infraspinatus and supraspinatus muscles), and axillary nerve (deltoid and teres minor muscles), US and MRI evaluation of these specific nerves and muscles, and comparison of specificity and sensibility of these evaluation tools would be interesting in the future.

Disclosure of interest

The authors declare that they have no competing interest.

References

[1] Misirlioglu TO, Palamar D, Akgun K. Periscapular muscle ultrasound as a diagnostic aid in scapular winging secondary to long thoracic nerve lesion. Joint Bone Spine 2018, http://dx.doi.org/10.1016/j.jbspin.2018.09.016.
[2] Coraci D, Romano M, Paolasso I, et al. A case of traumatic long thoracic nerve suffering : high-frequency ultrasound finding. Joint Bone Spine 2017;84:505–6.
[3] Krzesniak-Swinarska M, Caress JB, Cartwright MS. Neuromuscular ultrasound for evaluation of scapular winging. Muscle Nerve 2017;56:7–14.
[4] Küllmer K, Sievers KW, Reimers CD, et al. Changes of sonographic, magnetic resonance tomographic, electromyographic, and histopathologic findings within a 2-month period of examinations after experimental muscle denervation. Arch Orthop Trauma Surg 1998;117:228–43.
[5] Nguyen C, Guerini H, Zauderer J, et al. Magnetic resonance imaging of dynamic scapular winging secondary to a lesion of the long thoracic nerve. Joint Bone Spine 2016;83:747–9.

Zauderer Jennifer [a,*]
Guérini Henri [b]
Roren Alexandra [a,c,d]
Drapé Jean-Luc [b,c]
Rannou François [a,c,e]
Nguyen Christelle [a,c,e]
Lefèvre-Colau Marie-Martine [a,c,d]
[a] *AP–HP, hôpital Cochin, service de rééducation et de réadaptation de l'appareil locomoteur et des pathologies du rachis, 75014 Paris, France*
[b] *AP–HP, hôpital Cochin, service de radiologie B, 75014 Paris, France*
[c] *Université Paris-Descartes, faculté de médecine, 75006 Paris, France*
[d] *ECaMO team, institut fédératif de recherche sur le handicap, Inserm UMR-S 1153, Paris, France*
[e] *UFR biomédicale des Saints-Pères, Inserm UMR-S 1124, 75006 Paris, France*

* Corresponding author.
E-mail address: jennifer.zauderer@gmail.com
(J. Zauderer)

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