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## Letter to the Editor regarding: A case with iatrogenic pneumothorax due to deep dry needling

To the Editor

We read with interest the article, “Letter to the editor regarding: A case with iatrogenic pneumothorax due to deep dry needling” [1]. In this case, the authors reported an iatrogenic pneumothorax due to dry needling (DN) in a patient with dorsalgia. However, they did not mention the patient's and the needles' position in paraspinal muscles, medial scapular muscles, subclavicular muscles. The most basic and the simplest rule of dry needling is “proper positioning of the patient and the needle and palpating the trigger point.” This rule may be applied to every muscle and possible complications may be avoided by obeying this rule.

Dry needling, as a cost-effective and microinvasive procedure, became a popular treatment method which can be utilized for various indications including myofascial pain syndrome. One of the most fearsome complications of DN is pneumothorax. [1] Besides, damaging the neurovascular structures during the procedure is a possibility. For example, epidural hematoma after DN of cervical region was reported [2].

Pneumothorax may occur by DN of thoracic paravertebral, upper trapeze, rhomboid, and levator scapula muscles, which are the locations trigger points are most frequently observed, and as a consequence of that DN by ultrasound guidance is gaining attention. It has been demonstrated that trigger points on piriformis muscle may be treated by DN without causing

any damage to sciatic nerve [3]. Also, injections of local anesthetic agents to trigger points in serratus muscle securely with ultrasound guidance has been demonstrated which puts ultrasound forward for safe injections in hazardous locations [4].

Dry needling of medial scapular muscles must be performed with patient in side-lying position.  $0.3 \times 30$  mm and  $0.3 \times 60$  mm needles should be used for rhomboid and medial subscapularis muscles, respectively. Needle should be angled and inserted in a course between scapula and lung (Fig. 1a) [5]. For thoracic paraspinal muscles, patient must be in prone position. DN should be performed in caudomedial direction in the safe zone 1 cm apart from the spinous processes.  $0.3 \times 30$  mm may be used for this injection (Fig. 1b) [5]. For dry needling of iliocostal muscles, patient must lay down in prone position. Index finger and middle finger should be placed on consecutive intercostal spaces to avoid the needle inserting into these spaces. Needle must be directed onto the costa perpendicularly and a  $0.25 \times 13$  mm needle may be used for this intervention (Fig. 1c) [5].

Dry needling of thoracic region may cause anxiety on physicians because of complications such as pneumothorax. Aforementioned techniques may diminish the risk of complications. Nevertheless, we may achieve maximum security if we may establish ultrasound guidance for injections in our daily practice. More studies on this topic are required for reaching the perfect techniques for DN.

<https://doi.org/10.1016/j.radcr.2020.09.006>

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**Fig. 1 – Dry needling position of (a) subscapularis medial part, (b) thoracic paravertebral muscle, and (c) iliocostalis muscle**

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Received 29 June 2020

Accepted 2 September 2020