Myosonography: An Easy and Painless Technique to Detect Tongue Fasciculations

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A 58-year-old woman was diagnosed with motor neuron disease (ALS) of 8-month duration. Examination showed spastic dysarthria, atrophic tongue, diffuse fibrillations, mild wasting, and weakness of intrinsic muscles of hands, brisk tendon jerks, and bilateral flexor plantar response. Nerve conduction study was normal. Needle electromyography (EMG) of tongue showed diffuse fibrillations (40–50 Hz) and no fasciculation [Video 1]. High-resolution ultrasonography (HRUS) of the tongue was done with 12–3 MHz linear transducer as shown in Figure 1a. The B-mode scan showed fasciculations appearing as involuntary twitching of small parts of resting genioglossus [Video 2] within 30 s. The M-mode scan showed irregular vertical cracks corresponding to each fasciculation [Figure 1b]. HRUS also revealed fasciculations in bilateral deltoid, biceps, triceps, and brachioradialis which were absent on EMG.

Reimers *et al*.[1] first described the role of ultrasound in detecting fasciculation. However, Misawa *et al*.[2] showed that myosonography is superior to EMG in detecting fasciculation in the tongue, biceps, and tibialis anterior. This could be due to the ability to observe a wide area of muscle. HRUS was shown to be quicker in detecting fasciculation compared to EMG.[3] In conclusion, myosonography is an easy, safe, convenient, quicker, and therefore a superior tool to detect fasciculations of tongue than EMG.

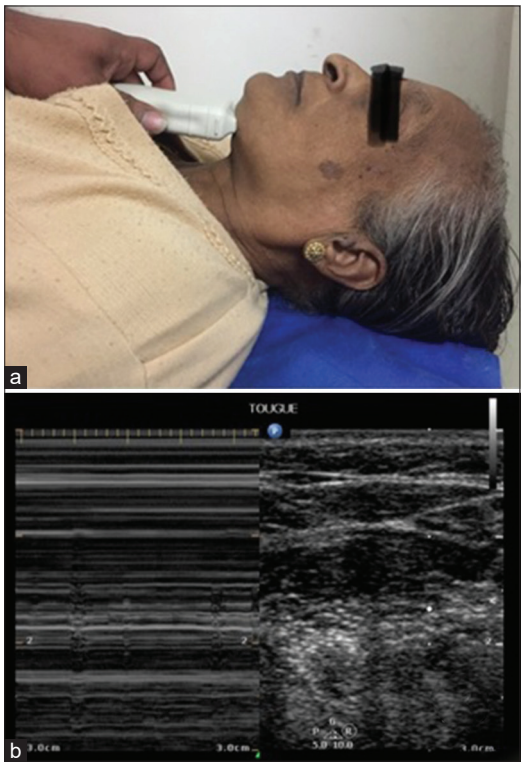

Figure 1: (a and b): Clinical photograph demonstrating the technique of transducer placement for tongue sonography (1a); HRUS (M-mode) showing irregular vertical cracks corresponding to single fasciculation (1b)

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Acknowledgements

The authors thank Mrs. Deepika P for assistance in compiling the pictures.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Submitted: 21-Nov-2019 **Accepted:** 21-Nov-2019 **Published:** 29-Jun-2020

Videos available on: www.annalsofian.org

DOI: 10.4103/aian.AIAN_565_19