



Questions Vol. 48, No. 4 – December 2012 Musculoskeletal ultrasound for sports injuries

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Acute inflammatory demyelinating polyneuropathy (Guillain-Barré syndrome, GBS) can be a significant cause of new. Each day, the role of musculoskeletal ultrasound (US) in the management of sports injuries is being consolidated. Yet, there is no doubt that the probe of US is (should be) the stethoscope of musculoskeletal physicians dealing with sports medicine. Not only for the diagnosis, but also for the close follow-up of the athletes and during likely onward interventions for their treatment, would US be of paramount importance. Accordingly, in this review paper on common sports injuries, we tried to shed light into the actual role of US in the clinical practice of sports medicine.

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1. Partial tearing of muscle fibers presents with:

- A. hypovascularity around the disrupted area
- B. loss of perimysial striation adjacent to the musculotendinous junction
- C. retraction of tendon ends
- D. no change in the echogenicity of the muscle
- E. no difference with respect to complete tearing on ultrasound

2. Vascularization of the muscle tissue:

- A. cannot be assessed by Doppler ultrasound
- B. can be assessed only by needle aspiration
- C. is decreased in inflammatory conditions
- D. is increased in inflammatory conditions
- E. remains constant in all disorders

3. Which of the following condition is due to a so-called aponeurotic distraction injury?

- A. Runner's knee
- B. Achilles tendinopathy
- C. Golfer's elbow
- D. Tennis leg
- E. Muscle compartment syndrome

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Musculoskeletal ultrasound for peripheral nerve lesions

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Although the combination of a detailed physical examination and a subsequent electrodiagnostic study is used for the diagnosis of peripheral nerve disorders, prompt imaging may also be necessary in daily practice. In this regard, as having higher spatial resolution, and being a faster, more cost-effective and dynamic study; ultrasound (US) has become a very convenient first-line imaging modality for the diagnosis, follow-up and treatment (*i.e.*, guiding interventions or planning for surgery) of peripheral nerve pathologies. Yet, using the probe of US to 'sono-auscultate' the peripheral nerves is indisputably paramount for unmasking the whole scenario of injury. Likewise, in this review, we will try to exemplify the role of US for the diagnosis and follow-up of peripheral nerve disorders in clinical practice.

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4. Which one of the following nerves is too small to be assessed accurately by conventional diagnostic ultrasound?

- A. Sciatic
- B. Tibial
- C. Peroneal
- D. Median
- E. Ulnar

5. A traumatic stump neuroma:

- A. is the most severe condition due to peripheral nerve injury
- B. appears homogeneously hyperechoic on ultrasound examination
- C. cannot be visualized by ultrasound
- D. is a neoplastic proliferation of the proximal end of transected nerve
- E. has a honeycomb-like echotexture

6. In chronic compressive neuropathies one can see:

- A. a decrease of the nerve cross-sectional area 2 cm above the lesion
- B. a decrease of the nerve cross-sectional area 2 cm below the lesion
- C. an increase in perineural and intraneural blood flow at the lesion
- D. a decrease of perineural blood flow at the lesion
- E. an increase of intraneural blood flow at the neuromuscular junction

See answers on page 716.