Medical Ultrasonography
2012, Vol. 14, no. 3, 261-262

The quadriceps tendon lesion

Carolina Botar Jid[1], Dan Vasilescu[1], Radu Onoe[2]

[1] Radiology Departement, „Iuliu Haţieganu" University of Medicine and Pharmacy Cluj-Napoca, Cluj-Napoca, Romania
[2] Artis 3 Clinic, Cluj-Napoca, Romania

Clinical case: Male patient, 71-years old, presented for the left knee pain. The clinical examination was in normal range and the conventional radiography releaved mild osteoarthritis. The patient was refered to our departement for ultrasound examination of the knee joint.

Ultrasonography (fig 1) showed a small hypoechoic, discrete heterogeneous lesion, well definded, with acoustic amplification located in the left quadriceps tendon. The color and power Doppler ultrasound revealed a hypervascular tumor. Sonoelastography revealed an elastic lesion. There was no other significant changes at ultrasound examination.

Questions:

1. What is your ultrasonographic diagnosis?
2. Which therapeutic approach would you propose?
3. What are the particular features of the case and the differential diagnosis?

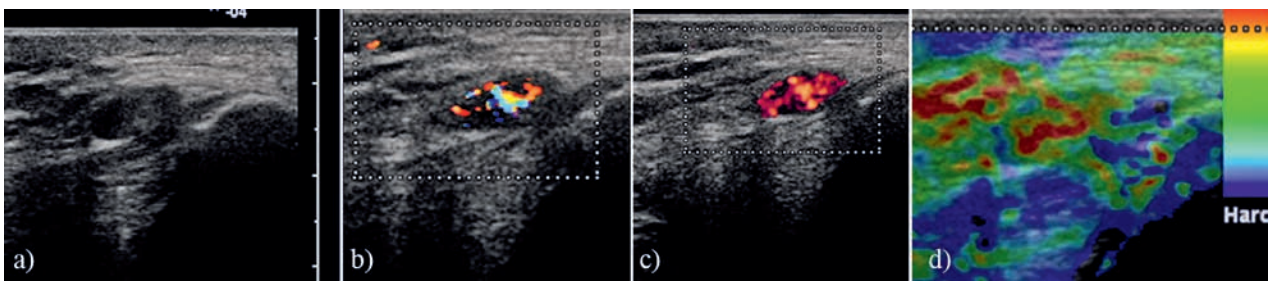


Fig 1. Suprapatelar region, sagittal view: a – 2D ultrasound; b – color Doppler ultrasound; c – power Doppler ultrasound; d - sonoelastography

Received Accepted
Med Ultrason
2012, Vol. 14, No 3, 261-262
Corresponding author: Carolina Botar Jid
Radiology Departament,
Emergency Clinical County Hospital,
Str Clinicilor Nr 3-5, 400006,
Cluj-Napoca, Romania
E-mail: inabotar@yahoo.com

Answer QUIZ vol. 14, no. 2

Reccurent pain and swelling of the right forearm in a 34 year-old patient

Linda Ghib, Ioana Felea

Rheumatology Department, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

1. What is the diagnosis?

The recurrent pain and swelling triggered by phisical activity, as well as the typical aspect of a mixture of hypoanechoic and hyperechoic components on gray scale ultrasonography and increased vascularity on color Doppler with flow during compression, suggested the diagnosis of intramuscular hemangioma of the right forearm. The MRI with late contrast enhancement confirmed this diagnosis.

2. Can you provide an explanation for intermittent occurrence of the algic syndrome in this case?

Physical exertion (in this case household activities) can lead to retrograde flow in the arterial segment distal to the hemangioma. This reversal of blood flow, which favors the vascular tumor, has been referred to as the steal phenomenon and results in ischemia of the surrounding tissues thus causing pain [1].

3. Are any other investigations necesary in this case?

Currently, the standard for imaging evaluation of soft-tissue hemangiomas is MR imaging [2,3], but if embolisation of the mass is to be considered angiography typically shows pooling of contrast material with arteriovenous shunting and enlarged feeding vessels. An arteriovenous soft-tissue hemangioma is typified by large tortuous feeding vessels, early draining veins, and tumor staining. Delayed imaging is necessary to detect the stain of venous hemangiomas because they are not usually identified in the arterial phase [3].

4. What treatment options are there?

Asymptomatic intramuscular hemangiomas do not require treatment [2]. Mildly symptomatic lesions can be treated with activity modification, analgetics or embolisation. The treatment of choice for symptomatic lesions is surgical resection preceded by embolotherapy or sclerotherapy, both used in order to reduce intraoperatice blood loss [4,5]. Total excision with a margin of normal muscles is recomended in order to reduce the risk of recurrence [6]. Radiation has been used to treat soft-tissue hemangiomas in surgically inaccessible or potentially dangerous sites, but the results have been disappointing because of side effects of the high doses needed to obliterate the hemangioma. Other treatment options are cryotherapy and sclerotherapy but they have proven to be ineffective, because they achieve only partial and temporary regression of the mass and relief of pain and compression symptoms [4].

References

1. Kristina I. Olsen, G. Scott Stacy, Anthony Montag. Soft-tissue cavernous hemangioma. RadioGraphics 2004; 24: 849-854.
2. Wild AT, Raab P, Krauspe R. Hemangiomas of skeletal muscle. Arch Orthop Trauma Surg 2000; 120: 139-143.
3. Murphey MD, Fairbairn KJ, Parman LM, et al. Musculoskeletal angiomatous lesions: radiologic-pathologic correlation. RadioGraphics 1995; 15: 893–917.
4. Shikhani AH, Shehadi SI. Surgical treatment of giant hemangiomas of the head and neck. Otolaryngol Head Neck Surg 1986; 94: 113-122.
5. Tang P, Hornicek FJ, Gebhardt MC, Cates J, Mankin HJ. Surgical treatment of hemangiomas of soft tissue. Clin Orthop 2002; 399: 205-210.
6. Bella GP, Manivel JC, Thompson RC Jr, et al: Intramuscular hemangioma: recurrence risk related to surgical margins. Clin Orthop Relat Res 2007; 459: 186-191.