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Letter

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Comments on the diagnostic role of ultrasonography in patients with gout

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Abstract

In a recently published article in Current Rheumatology Reports, the ultrasonography features of gout are described in detail. Because most of the ultrasound findings of musculoskeletal diseases are nonspecific and this information is relevant for an objective assessment of arthritis, some points need further discussion.

Key words: Arthritis, gout, imaging, ultrasonography.

Dear Editor,

Ultrasonography (US) is readily available and frequently used for diagnosis and management of inflammatory joint diseases. In Current Rheumatology Reports (Curr Rheumatol Rep) published online 06 January 2011, Thiele reported about the role of ultrasound in the diagnosis and management of gout.[1] We appreciate the detailed description of ultrasound features of gout in this article, but some points deserve further discussion.

The author describes microtophus as hyperechoic intra-articular particle of <1 mm diameter, without posterior acoustic shadow, that may be embedded in synovial lining. Gouty erosions are defined as non-physiologic interruptions of the hyperechoic cortical margin seen in 2 perpendicular planes, which may be filled by hyperechoic, tophaceaous material surrounded by an anechoic rim. Unformed tophaceous material is described as hyperechoic material within the confines of the hyperechoic joint capsule, which is displaceable by transducer pressure ("urate milk") and separated from the synovial lining by an anechoic rim.

The descriptions of US appearances of gout in the literature vary substantially and rely mostly on case reports.[2] The ultrasonographic features of acute gout are non-specific.[3] Some characteristic descriptions of chronic gout, like tophus and double contour sign have been reported,[4,5] but the above mentioned findings are not specific and need further validation. In addition, in musculoskeletal sonography imaging pitfalls are very common[6] and different quality US systems make it more difficult to interpret the gained results.

In our experience, hyperechoic particles less than 1 mm in size are not easily detectable and not distinguishable from artifacts even with high-resolution US. We consider the description of erosions to be unspecific and not a reliable US criterion to differentiate between erosions due to gout and rheumatoid arthritis or other inflammatory athritides. Also the definition of unformed tophaceous material is not specific and could easily be confused with artifacts which are very common in US technique.

Since arthritis is a nonspecific finding in rheumatic diseases, available imaging techniques remain mostly unspecific as well. In

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order to gain more characteristic data in the diagnosis and management of inflammatory joint diseases with US, we need future large prospective, randomized, controlled trials.

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