Clinical image

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Presentation

A 31-year-old male presented with acute gonarthrosis (arthritis of the knee) of 2 days' duration. He has no further history; 2 years before, he also had an acute gonarthrosis resolved after intra-articular glucocorticoid injection. Family history was negative.

Serology was as follows: rheumatoid factor neg, anti-citrulline peptide neg, borrelia neg.

At puncture, the following was found with polarized light microscopy (Fig. 1).

Fig. 1 Polarized light microscopy of punctate: circular spherules lying not all in the same plane with positive birefringence

Discussion

The punctate from the arthritic knee consisted only of some leucocytes and many crystals called “Maltese crosses”: liquid lipid crystals with positive birefringence (contrary to talc: negative regarding breaking direction); these are shaped like microspherules of 2–30 μm . They are considered to be a result of marked cell membrane damage and phospholipid release, and not causative of the arthritis [1]. Maltese cross occurs rarely and can be present (often solitary) in acute arthritides of recent onset [1].

There is no monosodium urate (MSU) nor calcium pyrophosphate nor calcium oxalate or other specific crystals.

They should not be misinterpreted: it is clearly quite different from MSU needles or cholesterol plates with characteristic notched corners [2, 3]. Glucocorticoid injection gives abrupt relief, and some may well respond to colchicine or NSAID [1].

Compliance with ethical standards

Disclosures None.

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