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- 28. Kotake S, Udagawa N, Takahashi N *et al.* IL-17 in synovial fluids from patients with rheumatoid arthritis is a potent stimulator of osteoclastogenesis. J Clin Invest 1999;103:1345–52.
- Jovanovic DV, Di Battista JA, Martel-Pelletier J et al. IL-17 stimulates the production and expression of proinflammatory cytokines, IL-beta and TNF-alpha, by human macrophages. J Immunol 1998;160:3513–21.
- 30. Lubberts E, Koenders MI, van den Berg WB. The role of T cell interleukin-17 in conducting destructive arthritis: lessons from animal models. Arthritis Res Ther 2005;7:29–37.
- 31. Yamamura Y, Gupta R, Morita Y *et al.* Effector function of resting T cells: activation of synovial fibroblasts. J Immunol 2001;166:2270–5.
- 32. Chabaud M, Page G, Miossec P. Enhancing effect of IL-1, IL-17, and TNF-alpha on macrophage inflammatory protein-3alpha production in rheumatoid arthritis: regulation by soluble receptors and Th2 cytokines. J Immunol 2001;167:6015–20.

- Stamp LK, Cleland LG, James MJ. Upregulation of synoviocyte COX-2 through interactions with T lymphocytes: role of interleukin 17 and tumor necrosis factor-alpha. J Rheumatol 2004;31:1246–54.
- Miljkovic D, Trajkovic V. Inducible nitric oxide synthase activation by interleukin-17. Cytokine Growth Factor Rev 2004;15:21–32.
- Udagawa N, Kotake S, Kamatani N, Takahashi N, Suda T. The molecular mechanism of osteoclastogenesis in rheumatoid arthritis. Arthritis Res 2002;4:281–9.
- 36. Kehlen A, Thiele K, Riemann D, Langner J. Expression, modulation and signalling of IL-17 receptor in fibroblast-like synoviocytes of patients with rheumatoid arthritis. Clin Exp Immunol 2002;127:539–46.
- 37. Attur MG, Patel RN, Abramson SB, Amin AR. Interleukin-17 up-regulation of nitric oxide production in human osteoarthritis cartilage. Arthritis Rheum 1997;40:1050–3.

Clinical Vignette

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Imaging of rice bodies in a non-rheumatoid shoulder

A previously well 36-yr-old woman presented with an 11-week history of pain and swelling of her right shoulder following minor trauma. Examination showed a significant, fluctuant, subdeltoid swelling with anterolateral subacromial tenderness. She had a full range of movement with positive impingement signs.

MRI and ultrasound scans were organized. The scans showed an abnormality deep to the deltoid suggestive of a distended subdeltoid bursa with possible rice bodies. The bursa was aspirated, yielding clear, straw-coloured fluid. The aspirate was sterile and contained only inflammatory cells and fibrin.

She was admitted for arthroscopy to obtain a tissue diagnosis. At surgery, large numbers of small granular rice bodies were identified and flushed from the bursa. Synovial biopsies were also sent for histology.

The patient made a rapid recovery with resolution of the pain and swelling. Histology of the granules revealed fibrin and inflammatory cells. Synovial biopsies showed chronic inflam matory changes only.

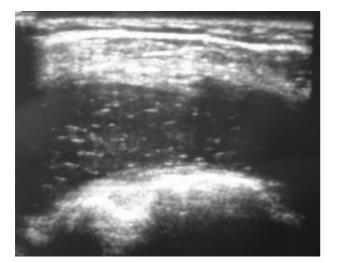


Fig. 1. Fig. 2.

Rice bodies have a well-documented association with rheumatoid arthritis and therefore the patient was screened with routine serology. All blood tests were within normal limits and the patient has had no further presentations with recurrence or other arthropathies after 24 months.

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