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Gout, Pseudogout and Calcium Crystal Diseases

Link - http://www.arc.org.uk/arthinfo/patpubs/6051/6051.asp

Gout, Pseudogout and calcium crystal disease

Key words: gout, urate crystals, pyrophosphate arthropathy, arthritis, knee, pyrophosphate arthropathy, pyrophosphate crystals

This booklet explains how calcium crystals can cause sudden attacks of inflammation (where the tissues of the body become hot, swollen and painful). When this happens in joints it is called 'pseudogout'. This literally means 'false-gout', so-called because the attack of inflammation resembles gout, a condition which is caused not by calcium but by urate crystals. When calcium crystals cause attacks of inflammation in tendons it is called 'calcific tendinitis'. This booklet describes how these short-lived, painful 'attacks' in joints and tendons are investigated and treated. It also explains why calcium crystals often get deposited in joints which have osteoarthritis, and the result this can have in terms of joint inflammation and damage.

What is a crystal?

All crystals are special in the way they are made. The very small particles (atoms) that make a crystal are arranged in a regular repeating pattern. This makes crystals very hard and strong. This is put to good use in nature – for example, the strength and hardness of seashells and human and animal bones come mainly from the fact that they contain a lot of calcium crystals. Crystals of the same chemical make-up tend to have repeating geometric shapes.

However, the hard, sharp angles of crystals make them abrasive – that is, they rub and grind down things which are in contact with them. That is, they are good abrasive agents. Also their surface can give out a strong electrical charge, which can make them more likely to interact with body tissues. For these reasons crystals can cause inflammation and injury in certain parts of the body.

What is an attack of pseudogout usually like?

Pseudogout most commonly affects the knee, usually in someone who is in late middle age or elderly. It is rare under the age of 60. Men and women are equally affected. The painful attack can happen 'out of the blue' in a knee that has never caused any problems before. However, more often it happens in a knee that is already affected by osteoarthritis which has caused intermittent stiffness and pain, especially on walking, over the previous months or years. It is unusual for more than one joint to develop an attack at the same time.

The attack starts suddenly, reaching its worst in just 6–12 hours. It is extremely painful, and your knee, or other affected joint, quickly becomes obviously swollen, hot, and tender to touch. The swelling is mainly due to fluid collecting in the joint. This build-up of pressure makes the knee very tense, stiff and painful to move – it will usually be least painful when you hold it in a bent (flexed) position. The overlying skin often appears reddened, tight and shiny. Because of the inflammation in the joint you may feel generally unwell and sweaty and have a raised temperature.

The typical attack gradually settles on its own, even without any treatment. The swelling usually starts going down within a week, though your joint may be very painful for the first few days of the attack and take up to 2–3 weeks to return to normal.

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