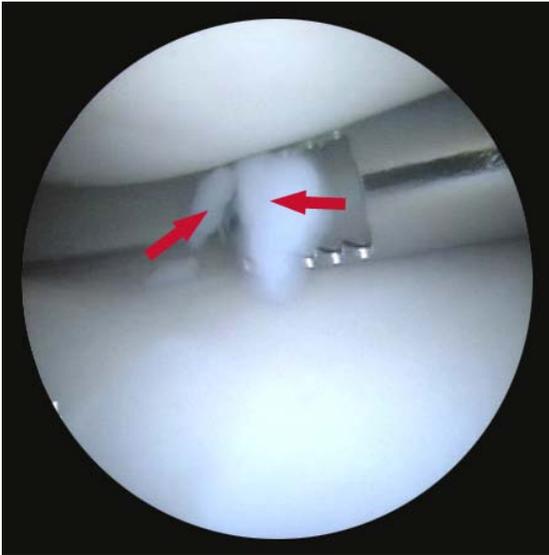


HOW IS IT TREATED?

Although [spontaneous regression has occurred in this condition](#) the treatment of choice is no longer synovectomy which is a debilitating procedure in the young patient that frequently presents with this condition. This was the treatment when the aetiology was poorly understood.

The treatment of choice now is day case keyhole surgery. This will enable your surgeon to look for the causative lesion like the plical fold and arthroscopically release or remove it. Your surgeon will also try and remove every last loose body (red arrows in the figure below) and villi, as loose bodies



themselves can cause excessive wear of the surface lining of the joint.

Not all patients with plical folds causing degenerate changes in a knee joint will develop synovial chondromatosis. Good results are reported with [simple removal of loose bodies via arthrotomy](#) and arthroscopic removal of the loose bodies and partial excision of the plica. [Local recurrences are easily dealt with at second](#) or third arthroscopies.

If you have any other questions please do not hesitate to ask your Orthopaedic and Trauma surgeon.



Synovial
Chondromatosis

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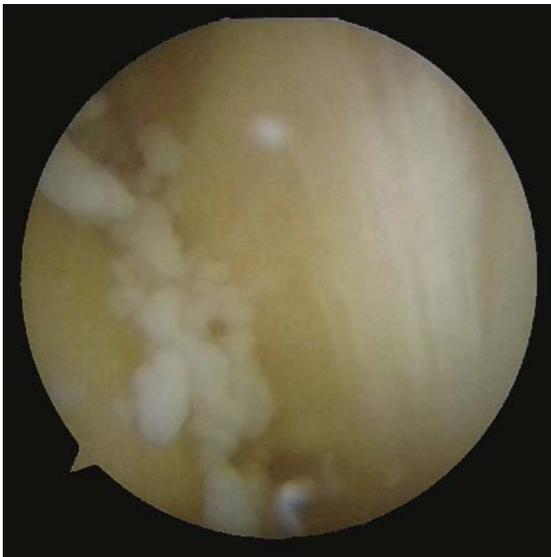
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SYNOVIAL CHONDROMATOSIS

Synovial chondromatosis is a benign condition in which there is a benign transformation of the lining of a joint (synovium) to produce nodules of cartilage. It occurs most commonly in the knee, but also has been reported in other joints like the hip jaw and ankle. A similar process rarely also affects the sac beneath tendons as they pass over bones (bursae) and tendon sheaths.

HOW DO I KNOW IF I HAVE SYNOVIAL CHONDROMATOSIS?

Only one joint is affected in Synovial Chondromatosis. Pain, swelling, and stiffness are the most common clinical symptoms. The history is often of several months or years with well localised discomfort and



swelling. In spite of the many loose bodies (seen as white granular tissue in the figure above) early in the history these are often small and soft so locking is uncommon unless the condition has been present many years and

the loose bodies have calcified. The clinical signs include loss of range of motion, due to a large effusion, and tenderness over one or other plicae.

CAN IT BE PREVENTED?

No, as the cause is not exactly known. However, early presentation to your doctor if you have a swollen knee is best. The GP will then refer you to an Orthopaedic and Trauma surgeon. The outlook is good in most cases.

WILL I NEED TESTS?

The special investigation of choice used to be arthrography after which multiple small, sharply defined defects were outlined. Occasionally, these coalesced to form larger cartilaginous masses. The investigation of choice now is MRI which is much less invasive. Aspiration may help distinguish other conditions like haemophilic arthropathy. However, in synovial chondromatosis aspiration is frequently futile as the needle blocks with the loose bodies.

WHAT IS THE CAUSE?

We now know something about the process leading up to this condition. Synoviocytes are believed to be responsible for [the production of synovial fluid, for fluid and particulate wear absorption from the joint cavity, and for blood/synovial fluid exchange of oxygen and nutrients](#). In Synovial Chondromatosis, loose bodies of irregularly rounded cartilage or calcified cartilage are found both free and attached as pedunculated villi arising from the synovium. Microscopically, the pedunculated lesions (red arrow pointing to the swelling with a stalk in the figure above right) are areas of growing cartilage in the tissue below the surface layer of the



synovium. The thought is that the pedunculated lesions separate forming the loose bodies. [They become free within the joint as multiple small cartilaginous loose bodies nourished by the synovial fluid. The chondrocytes in the loose bodies continue to multiply, and the loose bodies grow in diameter. Calcification appears in the central zone of the loose bodies, and in some cases, enchondral ossification takes place.](#) It is likely that this metaplastic change taking place in the synovium is in response to excessive wear of the surface cartilage of a joint from for example a tight [plicial fold](#) or [a labral tear in the hip](#). The synovium, acting as a phagocytic membrane, is overwhelmed and instead of gradual digestion of the particles of wear the synoviocytes undergo metaplastic change and the proliferating villi appear.