



mm. CaseStudy

Fixation of
osteochondral
fragments in the
knee joint using
mm.CS resorbable
compression screws

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**medical
magnesium**

The Doctor

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PD Dr. med. Christoph Kittl MD(res) is head of the knee team and the functional area of biomechanics at the Clinic for Trauma, Hand and Reconstructive Surgery at Münster University Hospital, one of the most renowned traumatology centres in Germany, providing interdisciplinary care for severely injured patients on a daily basis. After studying in Graz, he completed stations in Salzburg, Berlin and London and specialised in the surgical treatment of the knee.

Dr. Kittl is a member of the AGA Committee Ligament, a member of the DKG and ESSKA (and others) and regularly publishes with his team in high-ranking journals related to knee joint injuries, for which he has won international awards and prizes.

The Case

Presentation

This case presents a young female patient with osteochondrosis dissecans of the medial femoral condyle. An initial conservative therapy was not successful and ended in a free osteochondral joint body. This was refixed in arthroscopic and later mini-open surgery at the site of origin with 2 cannulated mm.CS 2.8 screws.

Patient profile and clinical findings

A then 13-year-old female patient presented to our knee consultation on the advice of the rheumatological paediatricians from our hospital. She had been suffering from knee pain, especially on the medial side, for several months. An MRI diagnosis was performed which revealed osteochondrosis dissecans (OD) of the medial femoral condyle. Based on the localisation and assessment of the OD, it was decided to treat conservatively for the time being and to allow healing.

The patient presented again four months later due to entrapment phenomena. An MRI scan of the left knee joint was performed again. This revealed the OD to be dislocated and a free osteochondral fragment in the knee joint, which was a clear surgical indication.

This was performed one week later. First, the knee joint was inspected in an arthroscopic procedure and the cartilage damage and fragment were localised. Through a medial approach, the free joint body was refixed at the site of the OD using 2 cannulated mm.CS 2.8 screws in a rotationally stable manner.

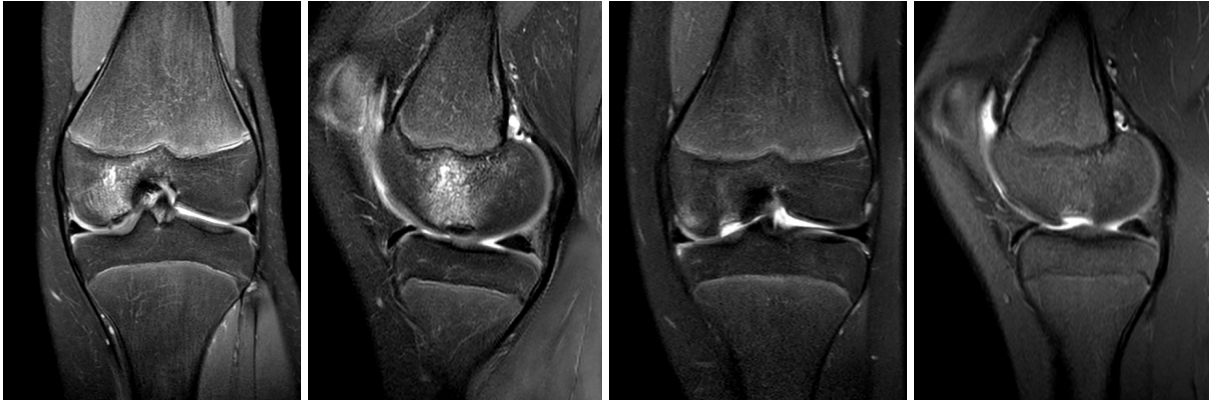


Figure 1: Original condition of the I-II° OD of the medial femoral condyle at the typical location in the coronary (A) and sagittal (B) layers. Three months later, dislocation of the osteochondral fragment occurred (C,D).

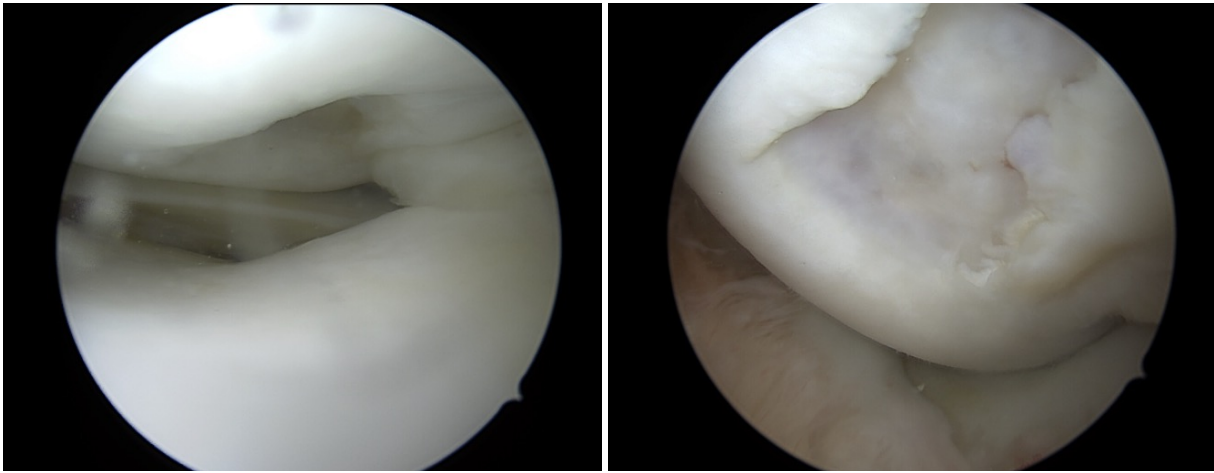


Figure 2: Surgical management first included arthroscopic salvage of the fragment and inspection of the cartilage damage (A,B)

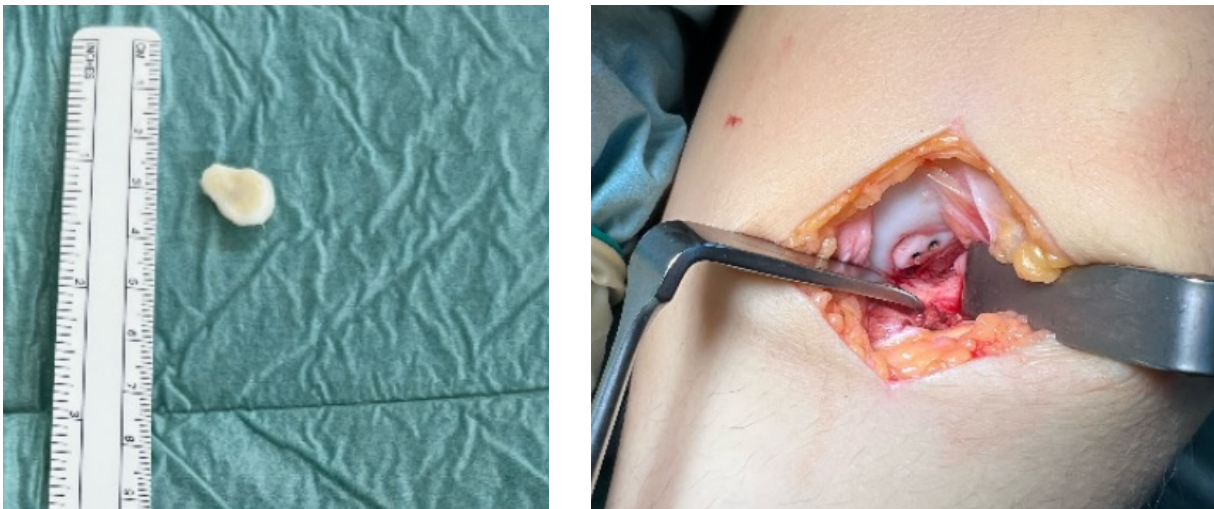


Figure 3: An approximately 15x10 mm osteochondral fragment was revealed (A), which was refixed with 2 mm.CS 2.8 screws. In the first step, the underlying OD bed was bone freshened (microfractured), to allow for improved healing

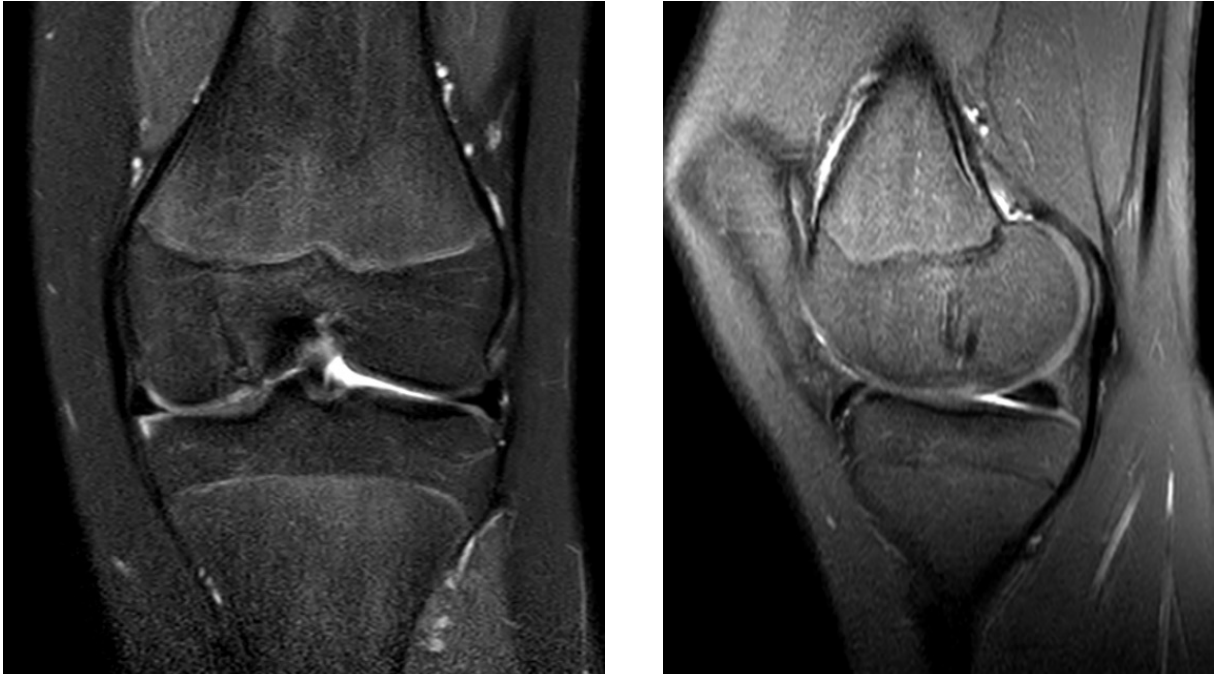


Figure 4: In the postoperative check after six months, a performed MRI imaging showed an almost completely healed fragment. The mm.CS 2.8 screws are in absorption with no abnormalities.

Postoperative treatment and course

The patient was prescribed a Mecron splint for the first week, then a range of motion of 0-0-60°, 0-0-90° and 0-0-110° was prescribed for 2 weeks each in a mobile orthosis. The patient was further instructed to limit 10kg of partial weight bearing on the operated leg for 6 weeks.

The postoperative course was without complications. Six months later, the patient presented again at our knee clinic, where she reported no further complaints.