

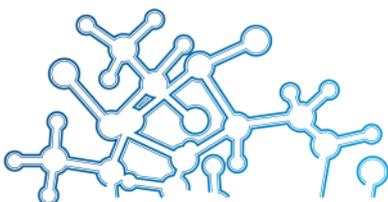
Fixation of Osteochondritis dissecans (OCD) Using ActivaPin™s and Arthroscopic Pin Applicator

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Summary Table

Patient no.: 16 Exitus: No
Patient initials: SSu
Smoking: No **Sex:** Male
Use of alcohol: No use **Age:** 15 years
Other disease: No **Height:** 170 cm
Contin. medication No **Weight:** 75 kg

Operator: Esa Partio
Dg no.: M93.2 **Operation:** Other
DG: OCD genu I dx **Operation no.:** NGF35
Injury date: - **Immobilisation:** Free mobilisation
Operation date: 25.3.2009 **Prim. weight bearing:** Partial weight bearing up to 3 weeks
Operation time: 20 min **Sec. weight bearing:** Full weight bearing after 3 weeks
Hospital stay: 1 day
Sick leave: 45 days
Bloodless field during operation: Yes
Prophylactic antibiotics: No

Implant 1: ActivaPin REF B-AP-2030 **LOT:** S8032
Implant performed: Excellent **Drilling:** K-wire
Implant 2: ActivaPin REF B-AP-2030 **LOT:** S8032
Implant performed: Excellent **Drilling:** K-wire

Operation: -
Notice: -

	Primary	3 w weeks	3 months	6 months	1 year	Call 3 Years
Operator:	Esa Partio	Esa partio	Esa partio	Esa Partio	-	Esa Partio
Obj. result:	Excellent	Excellent	Excellent	Moderate	-	Good
Subj. result:	Fair	Fair	Excellent	Moderate	-	Moderate
Primary position:	Exact	Exact	Exact	Exact	-	-
Bone union:	Non-union	-	-	Delayed	-	-
Swelling:	No	No	No	Slight	-	No
Redness:	No	No	No	No	-	No
Pain:	Occasional medic.	Slight, no medic.	No	Slight, no medic	-	Slight no Medic.
Second operation:	No	No	No	No	-	No
Range of motion:	Def. 10-30deg.	Normal	Normal	Def. <10 deg	-	Normal
Sports activities:	Ended activities	Changed activities	Like before	Changed activities	-	Changed activities
Tissue reaction:	No	No	No	No	-	No
Infection:	No	No	No	No	-	No
Thrombosis:	No	No	No	No	-	No
Radiol. final posit.:	Stable	Stable	Stable	Stable	-	-

Extra notices: After 6 months the posterior side of the knee was a little painful during sport activities. Control MRI was performed. MRI finding showed good progress in healing of the OCD and fluid accumulation around the popliteal ligament at the posterior side of the knee explaining the pain feeling during the sport activities.

1 Case Description

Patient was a 15 years old normal weight sports active male, with diagnosed Osteochondritis dissecans (OCD) in the right knee. In clinical examination in addition to OCD pain was noted around the popliteal tendon at the posterior side of the knee. MRI investigation was carried out in order to confirm the diagnosis.

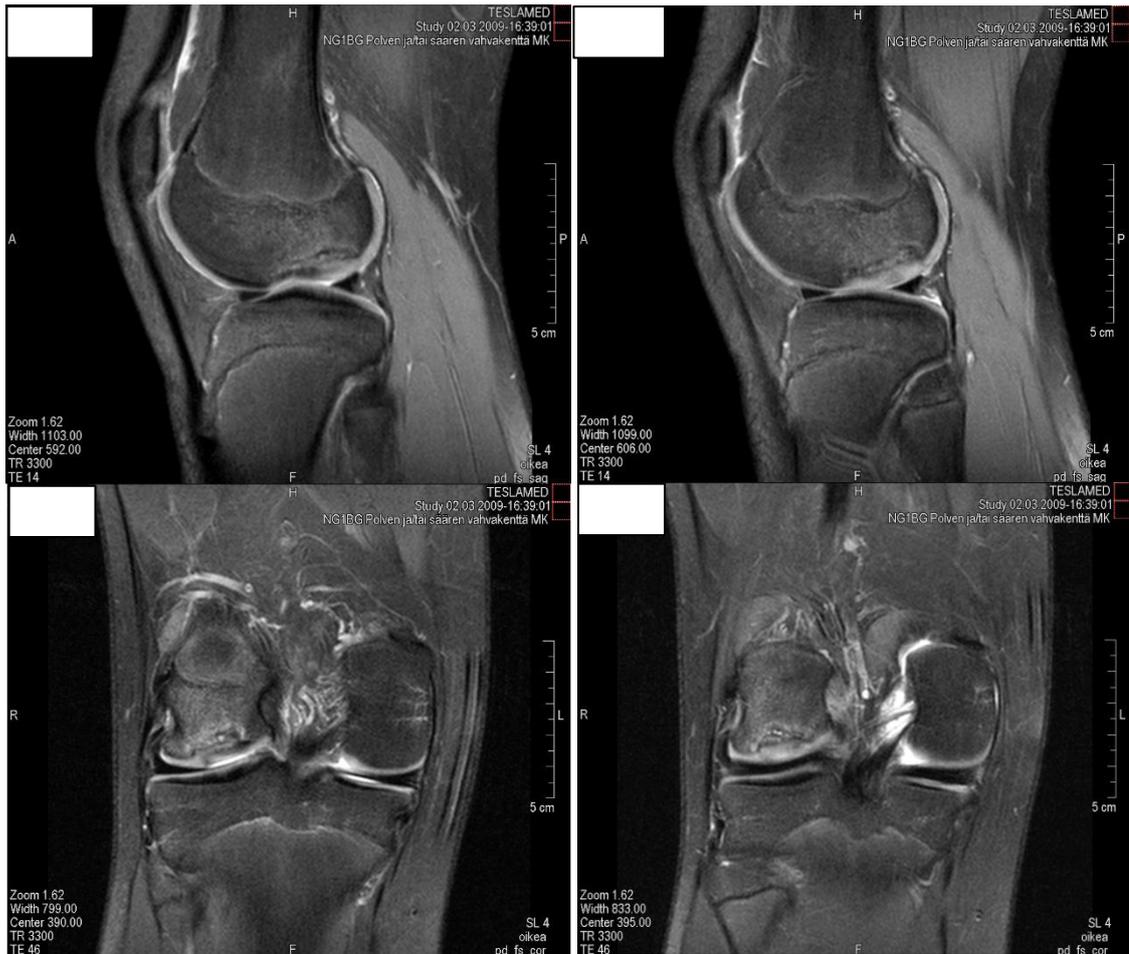


Figure 1 Preoperative MRI of the knee with one OCD lesion on the lateral femoral condyle.

MRI investigation revealed OCD lesion at the lateral femoral condyle and slight fluid accumulation around the popliteal tendon. Operative treatment of the OCD lesion was decided.

2 Surgical Procedure

Both ActivaPin™ 2.0 x 30 mm implants were fully inserted with ActivaPin™ Arthroscopic Pin Applicator and mallet. Drill holes were drilled slightly non parallel to achieve good stability to the fixation.



Figure 2 Drilling



Figure 3 Insertion of the pin



Figure 4 Pins were fully inserted under the cartilage surface

As a postoperative regimen free mobilization with partial weight bearing was applied for three weeks.

3 Results

At 2 months postoperatively X-ray investigation was carried out to evaluate the stability of the OCD lesion. The X-ray evaluation at 2 months postoperatively revealed a stable OCD fragment.



Figure 5 2-month postoperative X-ray.

At 6 months MRI investigation was carried out in order to evaluate the healing of the OCD lesion.

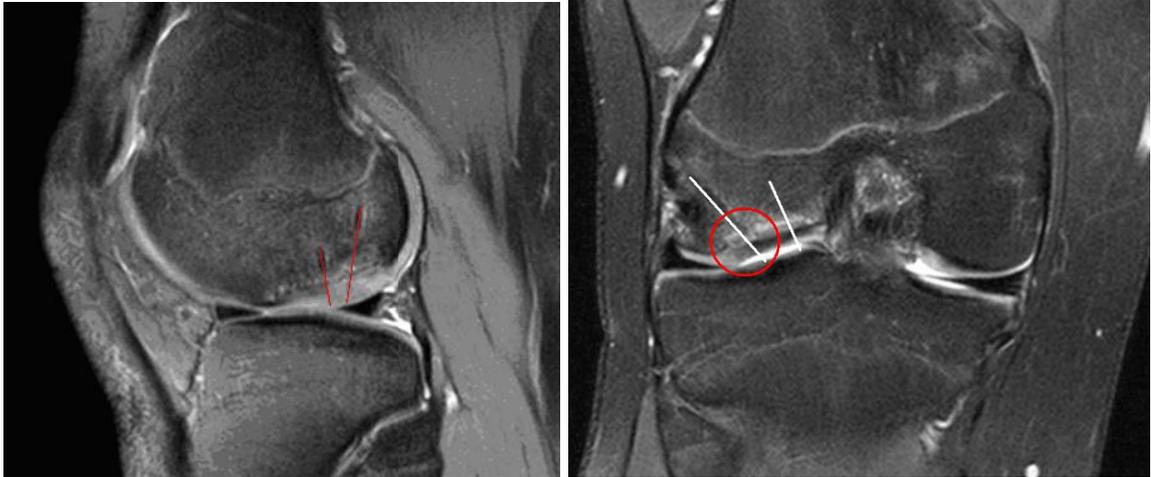


Figure 6 Left: Angled direction of the pins, Right: AP-view



Figure 7 Close up of the healed bone bridge medially from the pin.

Six months postoperatively early signs of healing of the OCD lesion was noted around the pin channels in the MRI investigation. Fluid accumulation around the popliteal ligament was also slightly increased comparing to the preoperative MRI.

After healing of the OCD the patient returned to sport activities. However, still 3 years after the operation pain at the posterior side of the knee limited the sport activities.

4 Conclusion

Result of the operation was good and patient was able to continue his semi-professional sport activities. Operation was easy to make and insertion feel of the both pins was smooth and pins slid in steadily with good friction. Grooved surface enables stable fixations even with small fragments. Instrument's ability to sink implant's proximal head slightly under the cartilage level secures fixation and allows tissue growth over the implant closing the channel to the joint. The pain at the posterior side of the knee noted at 3 year follow up most likely is caused by the irritation of the popliteal ligament. Further investigations are needed in solving this problem.

5 Contact Information Concerning the Case

Esa Partio, M.D., Ph.D.

6 Suggested Reading

- [1] Tuompo P, Arvela V, Partio E, Rokkanen P; Osteocondritis dissecans of the knee fixed with biodegradable self-reinforced polyglycolide and polylactide rods in 24 patients; International Orhtopaedics; SICOT 21 p. 355-360; 1997