



Non-Operative Management for Stable Femoral Condyle Osteochondritis Dissecans Lesions in Young Patients

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PURPOSE & HYPOTHESIS

- The primary purpose was to determine the effectiveness of non-operative management of stable osteochondritis dissecans (OCD) lesions in adolescent patients utilizing a post-operative hinged knee brace locked in extension. The secondary purpose was to assess factors that may influence OCD healing.
- We hypothesized that lower osteochondral lesion grade on MRI, younger age, and smaller initial size would be associated with increased healing.

METHODS

Design:

- Retrospective Medical Record Review

Inclusion Criteria:

- Ages 5-18 years old
- Diagnosed with medial or lateral femoral condyle OCD
- Underwent non-operative treatment

Exclusion Criteria:

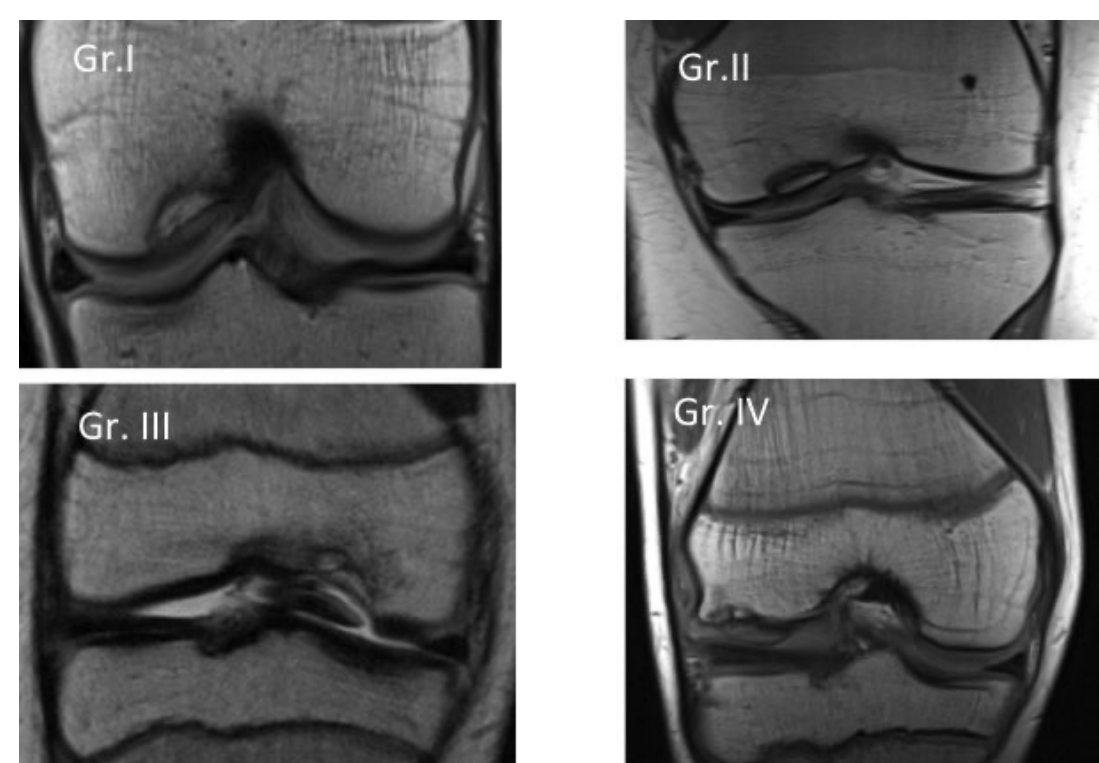
- Lack of clinical follow-up >6 months after diagnosis
- Treatment non-compliance.

Non-operative Management Protocol:

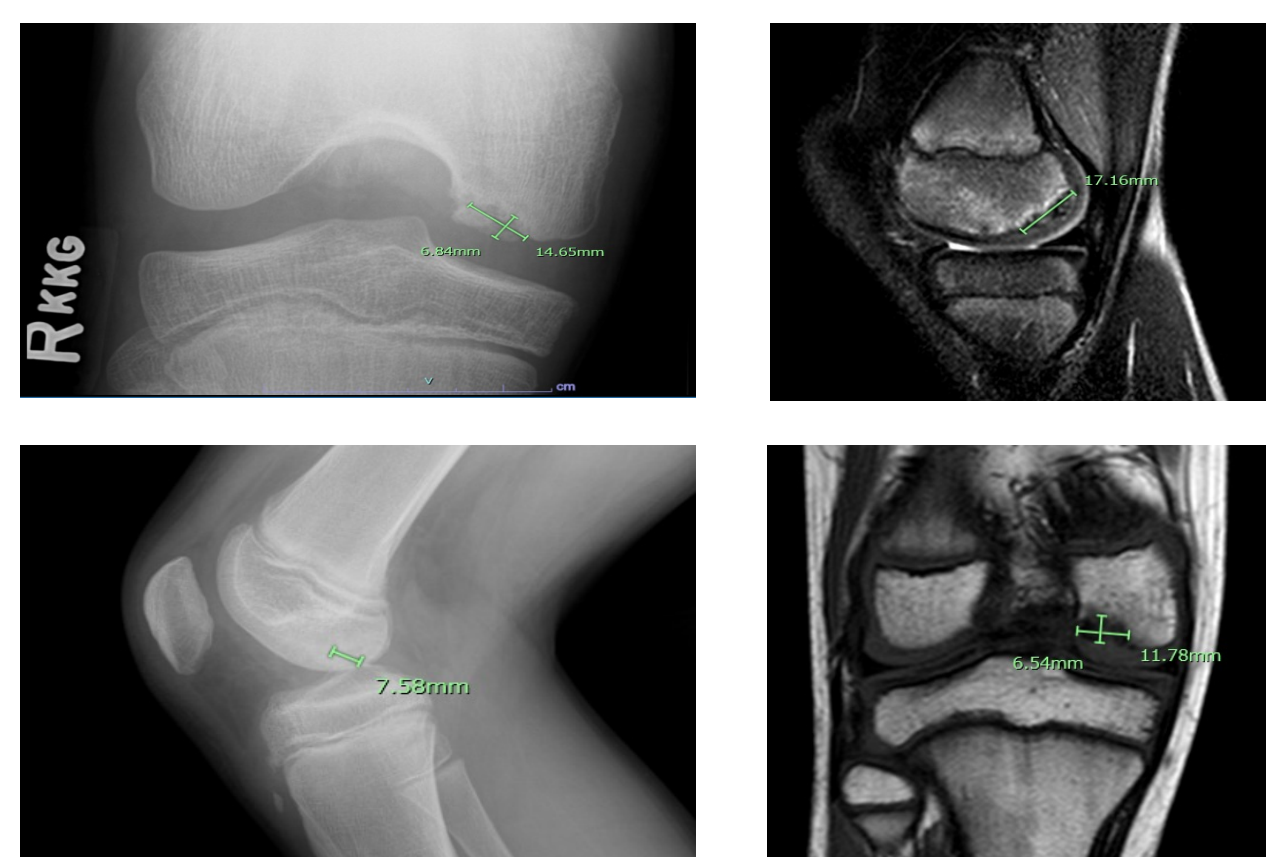
- Patients were placed in a hinged knee brace locked in extension until pain free and were subsequently restricted from high impact activities and encouraged to complete physical therapy. Patient were not placed in an unloader brace after the hinged knee brace.

Outcome Measures and Variables:

- Primary Outcome: Progression to surgical treatment
- Variables: mechanical symptoms at diagnosis, injury laterality, age, sex, height, and weight
- Radiograph Measurements: lesion grade and size based on MRI and x-ray

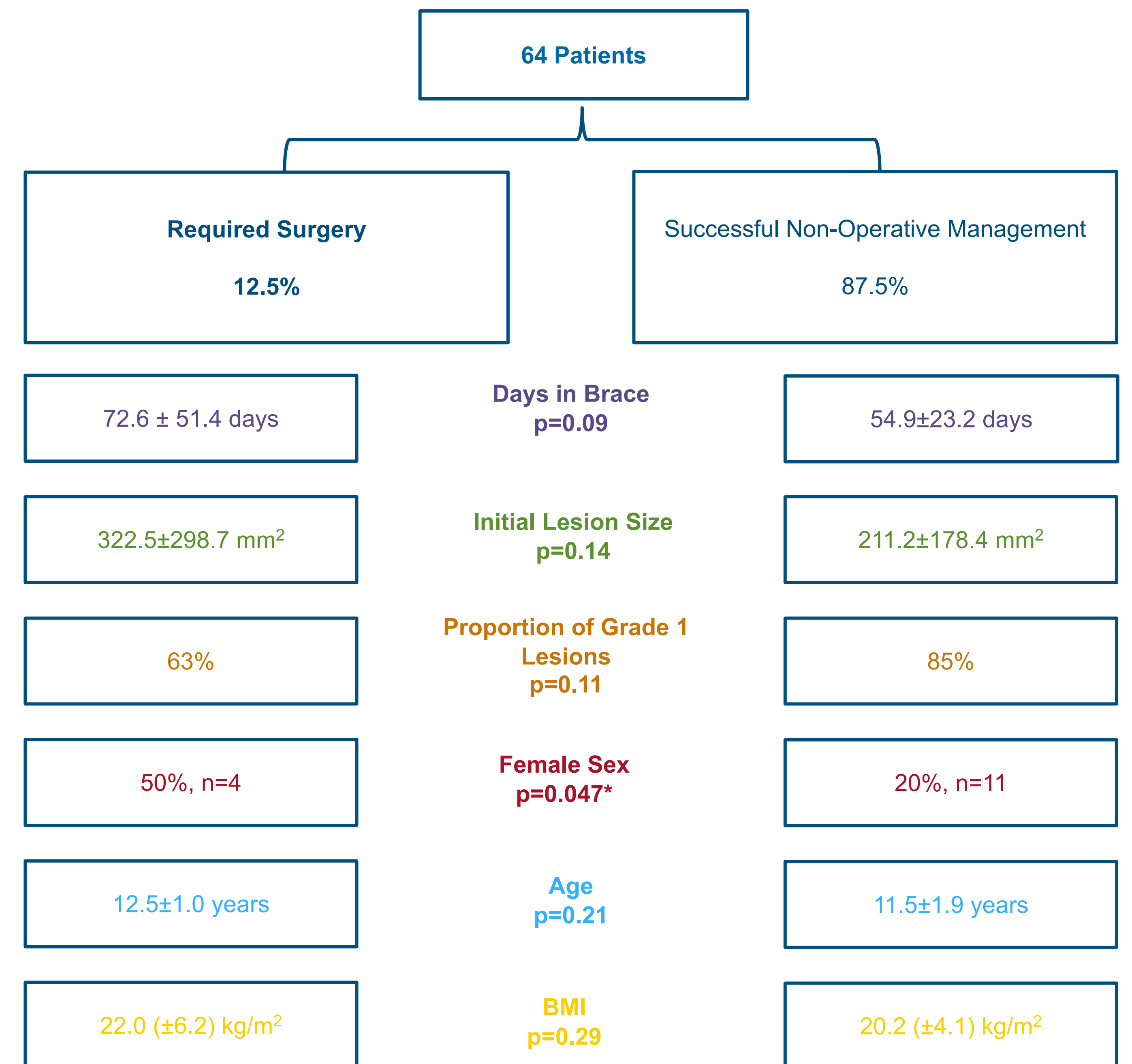


Lesion grading system based on MRI.
 Grade 1: Irregularity and softening of cartilage.
 Grade 2: Articular cartilage breached
 Grade 3: Definable fragment displaced but still attached
 Grade 4: Loos body and defect of the articular surface



Lesion width, depth, and length measurement on MRI and x-ray.

RESULTS



CONCLUSIONS

- Stable femoral condyle OCD lesions may be successfully treated using a hinged knee brace locked in extension for 4-8 weeks, followed by restricted activity and physical therapy until pain free in most cases.
- Female sex was positively associated with progression to surgery.

IMPLICATIONS

- Non-operative bracing with a hinged knee brace locked in extension seems effective in managing stable femoral condyle OCD lesions in adolescents and is a viable option to casting.