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Outcomes of an Early Return-to-Throwing Strategy Following Conservative Treatment for Capitellar Osteochondritis Dissecans Involving the Lateral Column

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Introduction and Background

This study aimed to investigate the clinical outcomes of patients who underwent conservative treatment for stable capitellar osteochondritis dissecans (OCD) involving the lateral column and who returned to throwing early after lateral column healing.

Material and Method

Twenty-three adolescent baseball players (mean age: 12.6 years) with stable OCD involving the lateral column were enrolled. The coronal width of the lesion was measured using plain radiographs, and lesion stability was assessed by magnetic resonance imaging, range of motion, and physeal maturity of the capitellum and radial head. Lesions were categorized as either localized lateral(n=6) or extended lateral(n=17), with a mean lesion width of 10.6 mm (52% of the radial head width, RHW). Return to throwing was permitted once lateral column healing was confirmed following rest and rehabilitation. We analyzed time to throwing resumption, radiographic healing of the entire lesion, and factors associated with poor outcomes or incomplete healing. The mean follow-up period was 24.8 months.

Results

The average time to return to throwing was 4.3 months after the initial diagnosis. Fifteen patients (65%) demonstrated complete radiographic healing of the lesion at a mean of 8.1 months. At the time of return to throwing, the mean lesion width had decreased to 4.8 mm (23% of RHW). Eight patients (35%) had incomplete healing with a central defect averaging 7.9 mm (36.8% of RHW); five of these (22%) were able to throw without pain, while three (13%) progressed to unstable lesions and required arthroscopic fragment excision. Factors significantly associated with incomplete central healing included age(p=0.03), lesion size(p=0.02), skeletal maturity of the radial head(p=0.03), and patient compliance(p=0.03).

Conclusions

In stable capitellar OCD involving the lateral column, an early return to throwing was possible in 87% of cases following lateral column healing. This strategy may serve as a viable alternative to prolonged rest while awaiting complete lesion resolution.

