

## Microfracture Treatment of Knee Grade IV Cartilage Lesions - Results at 15-Year Follow Up in a Group of Athletes

**Alberto W. Gobbi, MD, ITALY**

Georgios Karnatzikos, MD, GREECE

OASI Bioresearch Foundation  
Milan, ITALY

### Summary:

Microfracture is a well-established treatment procedure for chondral defects in high demand population with good short-term results. This study aimed to evaluate long-term clinical outcome of microfracture treatment in athletes.

### Abstract:

Microfracture is a well-established treatment procedure for chondral defects in high demand population with good short-term results. This study aimed to evaluate long-term clinical outcome of microfracture treatment in athletes with knee grade IV chondral lesions.

### Material & Methods:

We prospectively followed up a group of athletes for a minimum follow-up of 10 years. Between 1990 and 2001, a total of 170 patients underwent microfracture treatment of their knee. Finally, 55 patients qualifying in the inclusion criteria (average age 31 years) were available at final follow-up (average follow-up 15 years). Average size of the lesion was 3.9 cm<sup>2</sup>. Lysholm, Tegner and IKDC (subjective-objective) scores were utilized preoperatively and postoperatively, at 5 years and at final follow-up. KOOS, VAS and Marx scores were collected at final follow-up.

### Results:

All patients showed statistically significant improvement in all scores in the first 5 years; after 5 years most of them deteriorated. Patients with smaller lesions (< 4 cm<sup>2</sup>) and younger patients (= 30years) showed significant better results in KOOS, VAS and Marx scores at final follow-up. The following results were significant at the p < 0.05 levels: IKDC Subjective evaluation was 46/100 preoperatively and 74/100 at final follow-up. Lysholm was 56.8 pre-op and 79.9 final; IKDC objective analysis revealed: 0 A, 6 B, 32 C and 17 D preoperatively while at final follow-up 56% scored normal (A) and nearly normal (B). Tegner score at final follow-up (Tegner=5) showed a decline in sport activity level (80%). Only 4 patients could continue at the previous level of sports. Although the activity level of athletes with respect to sports had declined, they showed significant improvement in function and decrease in pain.

### Conclusions:

Microfracture can be a good option to treat small chondral defects in active individuals but competitive athletes should be advised that the improvement seen would decline with time.

### Keywords:

Chondral Lesions, microfracture, athletes