Clinically Significant Outcome Achievement After Osteochondral Allograft Surgery (Poster #19)

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I (and/or my co-authors) have something to disclose.

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Background

• Currently, fresh osteochondral allografts (OCAs) are used to treat a variety of articular and osteoarticular lesions.

• OCA transplantation is a reliable procedure that results in significant improvements in patient reported outcomes measures (PROMs); however, failure and reoperation rates may be as high as 20 and 30%, respectively.
• To examine the achievement rates of clinically significant outcomes [i.e. minimally clinically important difference (MCID)] following OCA transplantation, and identify factors associated with achievement
Study Design

- Prospectively maintained patient database with completed 2-year follow-up
  - 2014 - 2017
- Achievement rates of MCID on various PROMs including the International Knee Documentation Committee (IKDC) and the Knee Injury and Osteoarthritis Outcome Score (KOOS) Pain sub-scores
Methods

- MCID thresholds were based on previously published OCA literature (IKDC: 9.8; KOOS Pain: 16.7)
- MCID achievement rates were calculated at 6-month, 1-year and 2-year follow-up
- Univariate analysis was utilized to examine the effect of lesion size and demographic factors on rates of achievement
• 235 patients
• Mean (±SD) age: 30.0 ± 9.4 years
• 126 females (53.6%), 109 males (46.4%)
• BMI 26.6 ± 4.40
• Average lesion size
  • 3.20 ± 1.17 cm²
MCID Achievement

MCID Achievement Rates During Follow-Up Time Period

Percentage of Cohort

- 6 Month: 42.96%
- 1 Year: 56.98%
- 2 Year: 61.90%

IKDC

KOOS Pain
• Probability of MCID achievement on IKDC at 2 years was significantly greater when compared to 6 months [Odds Ratio (OR): 3.16, p=0.003).

• Female patients were more likely to report MCID achievement on IKDC (p=0.043).

• Patients achieving MCID on KOOS Pain had lower average BMIs compared to those that did not (26.1±4.0 vs. 27.5±4.5, p=0.043).
Limitations

• No differentiation by lesion location (e.g. medial condyle, lateral condyle, patellofemoral)
• Did not account for concurrent procedures – (e.g. meniscal transplant, osteotomy, ligament reconstruction)
• Multiple surgeons – likely slight variations in techniques
Conclusion

- At two years, more than 66% of OCA patients achieve MCID on IKDC and KOOS Pain
- Female patients are more likely to achieve MCID compared to male counterparts
- Higher BMI may negatively impact achievement of MCID with respect to pain