

# Osteochondral Allograft Transplantation for Large Chondral Lesions of the Femoral Head in Young Patients

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**INTRODUCTION:** Osteochondral lesions of the femoral head in young patients are a rare but challenging clinical problem. Fresh osteochondral allograft (OCA) transplantation is a restorative treatment option which may improve function, and delay hip arthroplasty, but there is a paucity of published data. The purpose of this study was to assess allograft survivorship and patient-reported outcomes in patients undergoing OCA transplantation for osteochondral lesions of the femoral head.

**METHODS:** Sixteen patients (17 hips) who underwent femoral head OCA transplantation between 1985 and 2021 and had a minimum 2-year follow up were included. Indications included avascular necrosis (82%), osteochondritis dissecans (6%), chondroblastoma (6%), and cystic lesion (6%). Median age was 17.2 years (range 12-43 years) and 69% were male. Median allograft size was 27.5mm and median thickness was 9mm. Evaluation included frequency and type of further surgery, Hip Disability and Osteoarthritis Outcome Score (HOOS), Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), modified Harris Hip Score (mHHS), and UCLA function score. Clinical failure was defined as conversion to arthroplasty.

**RESULTS:** Six of 17 hips (35.3%) experienced clinical failure (5 total hip arthroplasties and 1 resurfacing arthroplasty), with a median time to failure of 3.8 years (range, 1.0-8.5 years). Allograft survivorship was 87.8% at 3 years and 60.8% at 5 years (Figure 1). Of the remaining 11 hips, the median follow-up duration was 3.7 years (range, 2.1-9.5 years). At latest follow up, median HOOS was 76.6, median WOMAC was 81.9, median mHHS was 79.2, and mean UCLA score was 6.0.

**DISCUSSION AND CONCLUSION:** Young patients with large chondral lesions of the femoral head may benefit from fresh OCA transplantation. OCA is a useful treatment option that preserves function and delays the need for arthroplasty in young individuals with osteochondral lesions of the femoral head.

Figure 1. Femoral head OCA survivorship

