

ACL RECONSTRUCTION IN AN OBESE PATIENT: SIZE DOES MATTER!

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INTRODUCTION:

ACL reconstruction in obese patients poses a unique challenge to surgeons. Additional steps can be taken pre, intra and post-operatively. We discuss ways to increase the chances of a successful surgery.

REPORT:

23 year-old, male, presented with right knee pain and swelling after twisting injury playing futsal. He later developed instability. Examination, BMI 54.6 kg/m². No knee swelling and tenderness, varus/valgus stress and McMurray tests negative. Anterior drawer and Lachman tests positive. MRI: complete ACL tear, partial tear of LCL. Pre-operatively, underwent physiotherapy for joint ROM and muscle strengthening, and weight loss program. ACL reconstruction using trans-portal technique done. Size 10mm allograft used. Two portals created adjacent to patella tendon. An accessory anteromedial (AAM) portal created to assist with placement of anatomical femoral tunnel. Intra-operative finding: complete ACL tear. Post-operatively, patient kept on knee brace for two months. Brace locked at full extension post-operatively and flexion gradually increased every two weeks.



Figure 1: Allograft used. AAM circled in blue.

CONCLUSION:

Multiligament knee injury following low energy mechanism is not uncommon in obese patients. Pre-operative physiotherapy and weight loss imperative as high BMI patients have higher complication rates. Furthermore, increased quadriceps muscle strength of the uninjured knee and ACL reconstruction were associated with improvements in KOOS in these patients. Complications increased 9.2% for every 1-unit BMI increment(1). Complications include longer operative times and greater wound infection rates. Younger patients and small graft size described to be predictors of reconstruction failure. Taking these into account, decision was made to use allograft to reduce operating time, reduce chances of infection from potentially bigger autograft harvesting wound and to use the bigger sized allograft.

AAM provides good femoral footprint visualization and creates near-accurate femoral tunnel, thereby achieving better outcomes. We experienced lesser soft tissue resistance when angulating the drill when using the AAM in obese patients.

Arthrofibrosis occurs less frequently in obese patients, thus a more conservative post-operative rehabilitation maybe advisable as they may encounter difficulties following exercise regimes.

REFERENCES:

1. Effect of BMI on patients with multiligamentous knee injuries, TJ Ridley, 2014.