Results: 48 patients participated in sports within the 3 years prior to surgery. Average age at surgery was 29.6 years with an average follow-up of 4.6 years. Kujala pain score improved from 51.2 preoperatively to 82.6 postoperatively ($p < 0.0001$). 83.3% were able to return to at least 1 sport postoperatively, 62.5% were able to resume more than 1 sport, and 60.4% were able to return to 100% of the sports they participated in preoperatively. The average time to return to sport was 7.8 months (range, 3-19 months). Patients most commonly returned to weightlifting (16/17), cycling (11/12), soccer (7/8), elliptical (13/16), running (24/33), and yoga (6/8) (Figure). 77.5% who returned to sports felt that they returned at the same or a higher level compared to preoperatively. 77% felt that their physical fitness stayed the same or improved. 78.9% were satisfied to very satisfied with their surgical results.
Conclusion: Patients undergoing AMZ TTO for patellofemoral pain or arthritis had an 83.3% rate of return to 1 or more sports at an average of 7.8 months after surgery, with many patients returning at the same or higher level of intensity compared to their preoperative state.

Allograft versus Autograft for Medial Patellofemoral Ligament Reconstruction

SS-22

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Scott Shemory, M.D., Presenting Author
Nathaniel Lundy, B.S.
Michael Stitgen, B.S.
Robert Magnussen, M.D., M.P.H.
David Flanigan, M.D.

Introduction: Isolated medial patellofemoral ligament (MPFL) reconstruction has emerged as an effective treatment of recurrent patellar dislocations that occur in the absence significant patellofemoral malalignment or osseous abnormalities. Both allografts and autografts have been successful used for MPFL reconstruction. We hypothesize that MPFL reconstruction with allograft or autograft tissue yields similar low rates of recurrent dislocation and subjective patellar instability.
Methods: Chart review identified 117 MPFL reconstructions (80 allograft and 37 autograft) without concurrent bony procedures (such as tibial tubercle osteotomy) performed between 2008 and 2014 by four sports medicine fellowship trained orthopedic surgeons at our center. Patient demographics (age and sex) and surgical data (graft type) were identified by chart review. Chart review and patient interviews were undertaken to identify recurrent patellar dislocations as well as recurrent subjective patellofemoral instability. Recurrent dislocation and subjective instability risk were compared between the allograft and autograft groups.
Results: 53 patients (45%) with complete baseline data and minimum 1 year follow-up were contacted at a mean of 4.5 years following isolated MPFL reconstruction, including 37 patient with allograft reconstructions and 16 with autograft reconstructions. No significant differences in patient sex, age at reconstruction, body mass index, or time to follow-up were noted between groups. Recurrent dislocation occurred in 1 patient in the allograft group (2.7%) and 0 patients in the autograft group (0%), ($p = 0.51$). Recurrent subjective instability occurred in 9 patients in the allograft group (24.3%) and 5 patients in the autograft group (31.2%), ($p = 0.74$).
Conclusion: The use of either allograft or autograft tissue for MPFL reconstruction results in a very low (<3%) risk of repeat dislocation. Recurrent subjective instability occurs more frequently (1/4 to 1/3 of patients) at a similar rate for both graft types.

The Anterior-Posterior Distance Between the Tibial Tuberosity and Trochlear Groove in Patients with Patellar Instability

SS-23

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Miho Tanaka, M.D., Presenting Author
Taylor D'Amore, B.S.
John Elias, Ph.D.
Gaurav Thawait, M.D.
Shadpour Demehri, M.D.
Andrew Cosgarea, M.D.

Introduction: Tibial tuberosity osteotomy is often performed to correct excessive lateralization of the tuberosity in patients with patellar instability. An anteriorizing component has been recommended in the setting of chondral pathology, yet the ideal anterior-posterior relationship of the tibial tuberosity to the trochlear groove is unknown.
Methods: Knees with symptomatic patellar instability underwent static CT imaging, and were compared to age- and gender-matched controls. All knees were imaged in full extension. Tibial-tuberosity-trochlear-groove (TTTG) distance was measured to quantify lateralization of the tuberosity, and APTTTG distance represented the anterior-posterior distance between these two points. Lateral trochlear inclination (LTI), sulcus angle (SA) and trochlear depth (TD) were measured as indicators of trochlear dysplasia. Measurements were compared between the symptomatic and control groups using paired t-tests. Correlations between APTTTG with LTI, SA and TD were assessed using linear regression analyses.
Results: 22 knees in 18 patients with symptomatic patellar instability were included in the study group, with 22 control knees. TTTG and APTTTG distances were 19.9 mm and 8.3 mm in the symptomatic group, versus 16.8 mm and -0.5 mm in the control group, with a difference of 3.1 mm ($p=0.002$) and 8.8 mm ($p<0.0001$) respectively. The symptomatic group displayed greater trochlear dysplasia with lower LTI (13.0° vs 21.9°, $p<0.0001$), higher SA (152.7° vs 137.7°, $p<0.0001$) and lower TD (1.3mm vs 6.0mm, $p<0.0001$). There was strong correlation between APTTTG and TD ($r=0.62$, $R2=0.39$, $p<0.0001$).
Conclusion: Our findings demonstrate that the trochlear groove is almost 9mm more anterior to the tibial tuberosity