ISAKOS

International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine

11th Biennial ISAKOS Congress • June 4-8, 2017 • Shanghai, China

Paper #72

MPFL Reconstruction Combined with Anteromedialization Tibial Tubercle Osteotomy Versus Isolated MPFL Reconstruction in Patients with Recurrent Patellar Instability: A Quasi-Randomized Controlled Trial

Carlos Eduardo Da Silveira Franciozi, MD, PhD, Prof., BRAZIL
Felipe Ambra, MD, BRAZIL
Leonardo José Bernardes Albertoni, MD, BRAZIL
Pedro Debieux, MD, PhD, BRAZIL
Geraldo S.M. Granata Jr., MD, PhD, BRAZIL
Marcelo Seiji Kubota, BRAZIL
Mario Carneiro, MD, PhD, BRAZIL
Rene Jorge Abdalla, MD, PhD, BRAZIL
Marcus Vinicius Malheiros Luzo, MD, PhD, BRAZIL
Moises Cohen, MD, PhD, Prof., BRAZIL

Federal University of São Paulo
São Paulo, São Paulo, BRAZIL

Summary:
Recurrent patellar instability is frequently associated with patellar maltracking. Distal realignment is usually recommended for patients with TT-TG greater than 20mm. Nevertheless, selected patients with subtle abnormalities, TT-TG distance <20mm, may benefit from the distal realignment improving clinical outcomes when combined to MPFL reconstruction in comparison to MPFL reconstruction alone.

Abstract:
PURPOSE: Compare the clinical outcomes of the anteromedialization tibial tubercle osteotomy (TTO) combined with medial patellofemoral ligament reconstruction (MPFLR) versus MPFLR alone for the treatment of recurrent patellar instability (RPI) in patients with TT-TG 17 to 20 mm presenting its mid-term outcomes.

METHODS: From January 2008 to August 2013, skeletally mature patients with RPI and TT-TG 17-20mm were quasi-randomized into two groups: TTO combined with MPFLR (TTO+MPFLR) or MPFLR alone (MPFLRa). Quasi-randomization: both interventions were explained to the patients and they chose which one to be submitted. Subjects were evaluated for patellar tracking lateralization, patellar glide, apprehension test, increased femoral anteversion, Caton index, trochlea dysplasia by Dejour classification, TT-TG, Kujala, IKDC, Lysholm and Tegner.

RESULTS: Forty-two patients composed the study. TTO+MPFLR group was comprised of 18 patients and MPFLRa group was comprised of 24 patients. Demographics between groups were not significantly different related to age, gender, side, and cartilage lesion. Results are presented comparing TTO+MPFLR and MPFLa, respectively, as follows. Follow-up: 41.33±10.26, 40.5±11.63 months, p=0.81. Patellar tracking lateralization preoperatively: 3.33±0.84, 3.25 ±0.67, p=0.182. Patellar tracking lateralization postoperatively: 1±0, 1.33±0.48, p=0.006. Patellar glide and apprehension test preoperatively: All patients had a positive apprehension test or a patellar luxation at the patellar glide test rated as grade 4 before surgery. Patellar glide postoperatively: 1.17±0.38, 1.21±0.41, p=0.734. Apprehension test postoperatively: none. Increased femoral anteversion: 6%, 25%, p=0.9. Caton index preoperatively: 1.12±0.14, 1.12±0.11, p=0.97. Caton index postoperatively: 1±0.08, 1.12±0.11 (the same preoperatively), p=0.0012. TTO+MPFLR patients submitted to concurrent tibial tubercle distalization: 44%. Trochlea dysplasia: no significant difference between groups, p=0.67. TT-TG preoperatively: 18.5±1.24, 18.04±1.12, p=0.16. TT-TG postoperatively: 10.55±0.83, 18.04±1.12 (the same preoperatively), p<.001. No significant difference was seen

in the preoperatively scores (Kujala, IKDC, Lysholm and Tegner) between the groups. Significant improvements were seen in all scores except Tegner from the preoperative baseline to the latest follow-up for both groups. Also, the improvement from the baseline was statistically significant higher in the TTO +MPFLR group compared with the MPFLRa group in all scores, except for Tegner. Kujala improvement: 30.27 ±4.94, 23.95±8.37, p=0.003, also clinically significant favoring TTO+MPFLR. IKDC improvement: 38.59±7.26, 31.6±8.67, p=0.002. Lysholm improvement: 40.5±9, 36.2±8.9, p=0.02. Tegner improvement: -0.11±0.47, -0.25±0.53, p=0.5. No major complications were described in both groups.

CONCLUSIONS: TTO combined with MPFLR was better than MPFLRa in the surgical treatment of RPI patients with TT-TG 17-20mm.