Characterization Of Early Postoperative Complications Demonstrates Tibial Tubercle Osteotomies Can Be Performed Safely In An Outpatient Setting

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Purpose:

The purpose of this study was to characterize the early postoperative complications following outpatient Tibial Tubercle Osteotomy (TTO) to determine its safety in this setting.

Methods:

Patients undergoing TTO by a single surgeon between July 2017 and August 2022 for patellar instability or patellofemoral chondromalacia and achieving minimum 3 months of clinical and radiographic follow-up were evaluated for inclusion. Patient demographics, perioperative risk factors, and incidence of complications were collected retrospectively. Categorical data was analyzed using chi-squared and Fisher exact tests. Continuous data was analyzed using two-tailed t-tests and Mann-Whitney U data for parametric and nonparametric data, respectively.

Results:

A total of 195 knees in 167 patients met inclusion criteria, with a mean age of 24.7 ± 9.2 years and mean follow-up time of 10.9 months (range: 2 - 69 months). 51 early postoperative complications occurred in 47 (24.1%) knees in 42 (25.1%) patients. 10 major and 41 minor complications occurred. Major complications were associated with older age ($p = 0.015$),

smoking (p = 0.038), and smaller preoperative patellar tendon-lateral trochlear ridge distance (p = 0.012). 44 reoperations occurred in 42 (21.5%) knees in 37 (22.2%) patients. The most common reasons for reoperation included removal of symptomatic hardware (31 knees; 15.9%) and arthrofibrosis requiring lysis of adhesions and manipulation under anesthesia (8 knees; 4.1%). The mean time to reoperation was 13.0 months (range: 1 – 42 months). Smaller body mass index was associated with increased risk of reoperation (p = 0.002).

Conclusion:

Outpatient TTO is safe when performed with the described technique, however the later development of minor complications is not infrequent following surgery. Patients should be counseled regarding a relatively high incidence of hardware irritation, arthrofibrosis, and eventual reoperation.

Study Design: Retrospective case series; Level of evidence 4