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“The Effect of Preoperative Injections on Patient Reported Outcomes in Patients Undergoing Total Knee Arthroplasty”

INTRODUCTION: Knee replacement is one of the most common orthopaedic procedures in people over the age of 65. Given that many total knee arthroplasty (TKA) patients undergo intraarticular (IA) injections prior to TKA, it is important to understand the potential impact of IA injection exposure on outcomes following TKA.

METHODS: The current retrospective chart review included patients who underwent TKA between 01/01/2016 and 12/31/2022 and excluded those who had a follow up contralateral TKA within 6 months of primary TKA. Patients were categorized by the injection type received within 1-year prior to TKA. Patient reported outcomes (PRO) immediately before TKA were compared.

RESULTS: From the eligible 330 patients who underwent TKA, the majority were female (69%), white (59%), and had private insurance (36%). Of the patients who received at least one intraarticular injection within one year of TKA, 104 received ketorolac (31%), 47 received triamcilonone (14%), 62 received a mix of injections (18%), and 110 received no injections (33%). Hyaluronic acid patients were excluded from PRO data due to small sample size (n=7). We saw no significant differences in KOOS symptoms ($p=0.203$), activities of daily living ($p=0.067$), and quality of life ($p=0.446$) subscales in subgroups prior to TKA. We saw a significant difference in pain ($p=0.038$) scores observed by the following means: ketorolac (33.9), triamcilonone (43.7), mixed injections (38.7) and no injections (37.7). After Turkey-Kramer adjustment, ketorolac resulted in a significantly lower pain score than triamcilonone ($p=0.036$). We saw no significant differences in KOOS symptoms ($p=0.896$), activities of daily living ($p=0.128$), pain ($p=0.377$) and quality of life ($p=0.278$) subscales in subgroups at 3 months post-TKA.

DISCUSSION: Our results illustrate no difference in PRO at surgery or 3 month follow up between the injection and no-injection groups, with the only difference in KOOS pain scores occurring between ketorolac and triamcilonone treatment. We hope to further subclassify our preoperative injection group by time between injection and surgery to determine if a difference in PRO exists.