

THE REDUCTION OF HETEROTOPIC OSSIFICATION INCIDENCE FOLLOWING HIP ARTHROSCOPY IN PATIENTS TREATED WITH CELECOXIB

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ORTHOPAEDICS

BACKGROUND: Heterotopic ossification (HO) is a known complication following hip arthroscopy. Our primary objective is to determine the rate of HO formation following hip arthroscopy in patients treated prophylactically with and without Celebrex. Our secondary objective is to assess the clinical outcome (iHOT score) and determine the relationship between clinical outcome (iHOT Score) and patient's demographic factors.

METHODS: We performed a retrospective chart review from prospectively collected data. A total of 516 patients who received hip arthroscopic surgery between 2012 and 2016 at the Queen Elizabeth II Hospital, Halifax, Nova Scotia were identified using billing codes. Among the patient population, 280 patients received Celebrex, the rest of the patients (236) did not receive treatment. Post-operative radiographs were analyzed and quantified using the Brooker scoring system for assessing HO formation. iHOT scores at pre-operative and post-operative dates were compared and stratified by treatment and patient demographics.

RESULTS: The treated group showed significantly less HO development post-operatively when compared to the non-treated group ($p < 0.001$). The change in iHOT score from pre-operative to most recent was significant when stratified by treatment ($p < .028$). Additionally, there was statistical significance in the formation of HO when the study population was stratified by sex ($p < .0001$).

CONCLUSION: The findings of this study suggest that Celebrex significantly reduces the prevalence of HO formation following hip arthroscopic surgery. Furthermore, it appears to have a clinical correlation by significantly improving the patient outcome (iHOT score).