

Opioid Use After Screw Fixation of Slipped Capital Femoral Epiphysis

Jonathan R Warren, Stephanie Coupal, Colleen M Moreland, McKenna Carrol Noe, George E Quaye¹, Lisa M Berglund, Caleb Grote

¹Division of Health Services and Outcomes Research

INTRODUCTION:

Slipped capital femoral epiphysis (SCFE) is a common pediatric hip disorder primarily managed with transphyseal screw fixation. Opioid pain medication is often utilized post-operatively, but there is little evidence to guide prescribing practices. The purpose of this study was to describe opioid utilization and prescribing practices for patients after screw fixation of SCFE.

METHODS:

This was a prospective observational study of patients with SCFE who underwent transphyseal screw fixation. Patients and guardians were contacted on postoperative days 1, 3, and 5 for data collection. Post-discharge analgesic use, pain severity using a parental proxy, and pain control satisfaction were recorded. Patients who underwent surgical osteotomy or open reduction, patients with cognitive disability, or patients who had other injuries impeding accurate pain assessments were excluded.

RESULTS:

Of the 34 patients recruited for the study, 91.2% (31/34) of patients were prescribed opioid medications. Of these 31, four were lost to follow-up (87% follow-up). In total, 266 opioid doses were prescribed and 28 were utilized ($p < 0.0001$). On average, patients were prescribed 9.85 ± 3.8 opioid doses but utilized an average 0.77 ± 1.27 opioid doses ($p < 0.0001$). Sixty percent of patients did not use any of their prescribed opioid medication and 90% were satisfied with their pain postoperatively. Additionally, 90% of prescribed opioid doses went unused. There was no significant difference in pain control between patients who took opioids and those who did not for each postoperative day. Analysis of opioid use distribution demonstrated that a prescription of three doses post-operatively would be sufficient for greater than 95% of all patients.

DISCUSSION AND CONCLUSION:

Over-prescription of opioids occurs following screw fixation of SCFE, introducing oversupply into the population. Most patients do excellent with minimal opioid use and have low levels of pain. With adequate non-opioid analgesia counseling and use, outpatient opioid prescriptions following screw fixation of SCFE should be limited. If providers elect to prescribe opioids, we recommend prescribing no more than three doses following screw fixation of SCFE.

