Cluster-Randomized Trial of Opiate-Sparing Analgesia After Discharge from Elective Hip Surgery

Andrew N. Fleischman, MD, Majd Tarabichi, MD, Gabriel Makar, BS, Carol Foltz, PhD, William J. Hozack, MD, Matthew S. Austin, MD, Antonia F. Chen MD, MBA

Introduction: Orthopedic surgeons have relied heavily on opiates after total hip replacement (THR) despite no clear evidence of benefit and a rapidly growing abuse epidemic. Multimodal analgesia may reduce or even obviate the need for opiates after elective surgery.

Methods: In a cluster-randomized, crossover trial, 235 patients undergoing THR were assigned to receive multimodal analgesia with minimal opiates (Group A-10 tablets), multimodal analgesia with a full opiate supply (Group B-60 tablets), or a traditional opiate regimen without multimodal analgesia (Group C-60 tablets). The multimodal regimen comprised scheduled-dose acetaminophen, meloxicam, and gabapentin. Primary outcomes were daily pain and opiate utilization for the first 30-days. Secondary outcomes included assessments of satisfaction, sleep-quality, opiate-related symptoms, hip function, and adverse events.

Results: Daily pain was significantly lower in both multimodal groups, Group A (Coeff -0.81, \( p=0.003 \)) and Group B (Coeff -0.61, \( p=0.021 \)). While daily utilization and duration of opiate use was lower for both Group A (Coeff -0.77, \( p<0.001 \)) and Group B (Coeff -0.30, \( p=0.04 \)) compared with Group C, opiate use was also lower for Group A than Group B (Coeff -0.46, \( p=0.002 \)). There were significantly fewer opiate-related symptoms in Group A compared to Group C (\( p=0.005 \)), but Group B and C didn't differ (\( p=0.13 \)). Additionally, both multimodal regimens improved satisfaction and sleep, and there was no difference in hip function or adverse events.

Conclusions: A multimodal analgesic regimen with minimal opiates improved pain control while significantly decreasing opiate utilization and opiate-related adverse effects. It's time to rethink traditional opiate prescription after elective surgery.