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Multimodality regional pain control may reduce surgical infections and readmissions after colorectal surgery

Peter K. Kim
Albert Einstein College of Medicine, USA

Introduction: Rates of surgical site infections after colorectal surgery range from 10 to 25% and directly increase the incidence of readmissions, long-term complications and death following surgery. Improved pain management contributes to patient satisfaction, but may also have added salutary benefits. We hypothesized that improved pain management in patients with multimodality regional anesthesia would decrease the risk of surgical site infections and readmissions after elective colorectal surgery.

Methods: We performed a retrospective review of electronic medical records of elective, non-emergent, primary colorectal surgery cases from January, 2009 to July, 2011. Records were reviewed for epidural and regional anesthesia techniques, peri-operative infections, readmissions, and time to initiation of oral diet. Data was collected and compared to cases performed during the same period without multimodality pain management. Data was analyzed using Chi-squared univariate analysis.

Results: Sixteen of 70 (22.9%) cases performed without multimodality regional anesthesia resulted in peri-operative infections. Specific infections included Surgical Site (14), Clostridium difficile colitis (2), bacteremia (1), and urinary tract infections (2). Only 1 of 22 (4.5%) cases performed with MDPS resulted in a surgical site infection (Chi-squared=4.2; P=0.04). In colorectal surgery patients with multimodality regional anesthesia, readmissions were reduced from 14% to 4.5% (Chi-squared 1.7; P=0.19). Interestingly, there was no difference in time to initiation of oral diet.

Conclusion: Elective colorectal surgeries performed with regional multimodality epidural anesthesia and management of peri-operative pain by an anesthesiologist-led pain service may decrease readmission rates, possibly by decreasing the incidence of surgical infections.

kim.peter.p01@gmail.com