

Mechanical bowel preps offer no clinical benefit for pancreaticoduodenectomy

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Mechanical bowel preparations (MBP) are commonly administered preoperatively to patients who undergo a pancreaticoduodenectomy (PD) (Whipple procedure) to treat benign and malignant tumors of the pancreas, common bile duct or duodenum. MBPs are employed as a preventative measure in gastrointestinal surgery but their effectiveness in reducing perioperative infectious complications remains unclear. Now, a research team from the Department of Surgery at Jefferson Medical College of Thomas Jefferson University has concluded MBPs offer no clinical benefit to patients undergoing a pancreaticoduodenectomy. The results are set to appear in the August 2010 edition of the journal *Surgery*, but are available now online (see Editor's Note for Web address).

The researchers performed a retrospective review in which they analyzed clinical data from 100 consecutive PDs performed on patients receiving preoperative MBP from March 2006 to April 2007, and compared them to 100 consecutive patients who received a preoperative clear liquid diet (CLD) from May 2007 to March 2008. They found that there were no significant differences between the MBP and CLD groups in the rates of pancreatic fistula, intra-abdominal abscess or [wound infection](#). There were trends toward increased urinary tract infections and *Clostridium difficile* infections with the MBP group. The median length of postoperative hospital stay was seven days in each group and the 12-month survival rates were equivalent.

"Based upon these data and similar results from numerous randomized

prospective trials in colon and rectal surgery, we feel that patients have improved therapeutic outcomes without MBP prior to PD and we have excluded it from our practice," said Harish Lavu, M.D., assistant professor, Department of Surgery, and lead author of the study. "Given the recent influx of national and institutional quality improvement projects, it is appropriate to define the need and efficacy of MBP for PD if it is to remain in clinical practice."

MBP has been thought of as an essential factor for avoiding infectious complications and anastomotic dehiscence, most commonly in colon surgery. This is based upon the belief that MBP reduces the volume of solid or semi-solid contents at the time of surgery, theoretically reducing bacterial load, and the risk of intraoperative enteric spillage. MBP has become a standard of care across many surgical disciplines involving the gastrointestinal tract, including foregut surgery.

PD is a complex surgical procedure of the upper gastrointestinal tract designed to treat benign and malignant disorders of the pancreas and periampullary region. The operation involves resection of the pancreatic head and uncinate process, duodenum, and intra-pancreatic portion of the common bile duct, with reconstruction via anastomotic attachments between the pancreas, biliary tree, and stomach/duodenum to the jejunum. The operation is considered a clean contaminated case, and the major causes of postoperative morbidity include pancreatic fistula, intra-abdominal abscess formation, wound infection, [urinary tract infection](#) (UTI), and delayed gastric emptying.

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Provided by Thomas Jefferson University

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