Should preoperative mechanical bowel preparation be abandoned?

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Should Preoperative Mechanical Bowel Preparation Be Abandoned?

To the Editor:

Mechanical bowel preparation (MBP) before elective colorectal surgery is still considered a standard practice by many surgical associations. However, the results of 7 randomized studies have clearly demonstrated the safety of colorectal surgery without MBP. In addition, another study has recently shown that MBP could be associated with an increased risk of abdominal septic complications after colo-colic or high colorectal anastomoses.

Having incorporated the data of recently published randomized trials, we report herein the results of an updated meta-analysis and discuss its implications for the clinical practice.

The present meta-analysis included 10 randomized trials, which enrolled a total of 1983 patients (986 with MBP and 997 without MBP); statistical analyses were performed according to the Fleiss approach. Anatomostic leaks were more frequent in the MBP group (5.1% vs. 2.6%, odds ratio [OR] = 1.99; 95% confidence interval [CI], 1.23–3.23; \( P = 0.004 \)). Wound infections were more frequent in the MBP group (8.2% vs. 5.5%, OR = 1.54; 95% CI, 1.08–2.2; \( P = 0.015 \)). The rate of relaparotomy was higher in the MBP group (5.5% vs. 3.2%, OR = 1.76; 95% CI, 1.03–3.02; \( P = 0.035 \)). A trend toward increased incidence of intra-abdominal abscesses, as well as digestive complications, was also observed in the MBP group. Finally, 2 studies reported on hospital stay duration, which was significantly longer in the MBP group.

As the evidence-based data continue to accumulate suggesting that MBP before colorectal surgery is not only useless, but potentially harmful, there are two issues that remain to be elucidated: 1) what are the reasons for the deleterious effect of MBP? 2) How should these data be incorporated in the daily practice of colorectal surgeons?

While MBP seems to have little physiologic impact on colonic motility, it seems morphologically associated with inflammatory changes in the colonic mucosa, which could affect bowel wall healing. Moreover, in up to 30% of patients, MBP is inadequate and results in large amounts of liquid stools, which seems to increase the risk of intraoperative spillage. In many European institutions, it is now recommended to avoid MBP before elective colorectal surgery, and this approach has been adopted as the new standard by the French Digestive Surgical Association. Proponents of MBP will rightfully argue that in the majority of trials polyethylene glycol was used and that no antibiotics or antiseptics were added to the solution; however, it has never been demonstrated that other types of preparation were more effective in decreasing colorectal surgery morbidity in randomized trials. Other will argue that MBP should be performed before surgery to facilitate palpation and detection of tumors, but this is true for a small proportion of patients with small polyps in which we still perform MBP before surgery.

Finally, with the recognition of fast-track perioperative management of patients, it should be repeated that omission of MBP may play a role in accelerated clinical pathway of recovery after colorectal surgery, with a potential for decreasing in hospital costs. In 1972, Hughes stated: “Omission of enemas and bowel washes from the preoperative procedures will be welcomed by both patients and nursing staff.” Currently, many surgeons are not reluctant to operate on patients who did not receive MBP; this change of practice is now supported by evidence-based data and fits well with recently established clinical pathways of accelerated perioperative management, which could be eventually associated with a decrease in hospitalization cost.

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Prophylactic Ilioinguinal Neurectomy in Open Inguinal Hernia Repair

To the Editor:

We read with great interest the article by Mui et al.1 They resolved that the incidence of chronic groin pain, at 6 months, was significantly lower in those patients who had prophylactic ilioinguinal neurectomy than in those patients whose ilioinguinal nerve was reserved (8% vs. 28.6%, P = 0.008). The study was conducted on a total of 100 randomized patients (50 patients in each group), based on the assumption that a 20% difference in the incidence of chronic groin pain would have been meaningful.

The authors began their work on the wrong assumption that the incidence of chronic pain ranges from 18% to 63%; while analyzing a larger number of series according to the literature, it is possible to conclude that it ranges from less than 3% to 12%2–4 and that it decreases to less than 1% at 1 year.5 In our recent report (on 973 cases of hernioplasty) about the influence of preservation versus division of all three inguinal nerves on chronic pain,5 the presence of overall (mild, moderate, and severe) groin pain at 6 months and 1 year of follow-up was 9.7% and 4.1%, respectively.

Considering these data, we think that Mui et al could argue some conclusion if they had, in their experience, more than a 30% of chronic pain incidence; in addition, considering literature data, the study does not have substantial statistic power with only 50 patients in each group; moreover, the follow-up at 6 months is too short.

The authors also reported that the ilioinguinal nerve was identified in all patients and that there was extreme care during surgery to avoid nerve tissue inclusion during suturing and mesh placement. We wonder: why did the authors decide to study just and only the ilioinguinal nerve and not, for example, one of the other two nerves?

They do not give any data concerning iliohypogastric and genital nerves: Are they always identified and preserved, or are they resected? Or are they not identified at all? Moreover, their results regarding chronic pain may be distorted because these nerves could be unintentionally divided or injured, during herniorrhaphy, and, for these reasons, chronic pain could be generated.

Our study, the only one in the literature that evaluates data concerning all three inguinal nerves, clearly demonstrates that pain is not reported in any case of hernia repair, with all three nerves preserved, and that the risk of developing groin pain increases with the number of nerves concomitantly not detected: relative risk increases from 2.2 to 19.2 if one or three nerves have not been recognized, respectively.5

Finally, to accept the assumption of Mui et al that prophylactic ilioinguinal neurectomy should be considered as a routine surgical step during open inguinal hernia repair, we should extend neurectomy also to the other two sensory inguinal nerves (the iliohypogastric and genital nerves) because both cross the inguinal canal and they may come in contact with the mesh or with the suture. However, we have no evidence to consider surgical triple neurectomy as a standard procedure during inguinal hernia repair.

On the contrary, considering our results,5 we want to emphasize the importance of routinely identifying and preserving all three inguinal nerves during open hernia repair, reserving neurectomy only in the case of unintentional nerve division or as a treatment of severe chronic pain after 1 year of not responding to medical therapy.

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