

Commentary: Defecation Delay in Patients After Lung Tumor Surgery: A Prospective

Nested Case-Control Study

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Dear Editors

This is a brief commentary to our article “Defecation delay in patients after lung tumor surgery: a prospective nested case-control study” [1]. The author Chen used to be a resident and rotate in different departments of surgery and find that discomfort related to defecation is quite common in patients receiving various operation under general anesthesia. Even operations not associated with gastrointestinal tract like thyroidectomy may develop a need for laxatives though patients recovered quickly after the procedure. However, this problem is usually not fully appreciated and just a few studies focused on it. The majority of such studies were associated with orthopedic surgery and focused on chronic constipation in a long term after surgery [2,3]. Researchers tended to believe that decrease in activity especially walking out of bed for a period and the use of opioids to stop the pain are the main causes of this problem [4,5]. Different from the studies above, we aimed at acute constipation, or in the other words, discomfort related to defecation in a short period after the operation. To get further knowledge about this problem, we conducted a prospective and observational study in nested case-control design, which means the outcome we care about will appear as the study proceed. In the very beginning, we wanted to simplify our protocol for the definition of constipation is so complicated and there is no unified definition of the discomfort related to defecation after surgery. So we choose the time interval of the first defecation after the opera-

tion as our outcome and use 3 days as the cut-off value according to Rome III criteria [6] and Mantegazzi’s work [7]. At least 80 patients were needed to obtain a statistically significant result and we get the conclusion as expected. The importance of the result is that it reminds us the postoperative problems associated with defecation are even more common than we think in addition to orthopedic and gastrointestinal surgery. For if we expanded the definition like what Mantegazzi [7] did in their research, we would see more patients suffer from similar symptoms. Therefore, we truly need to pay more attention to this problem during clinical practice. And we found changes in stool traits after surgery according to Bristol stool classification. Walking out of bed early and the minimally invasive approach of the surgery may play an important role. These conclusions are similar as reported in previous studies. What’s new for us is that the use of laxatives is significantly different between patients who suffered from defecation delay and patients who didn’t. This provided us with the idea that whether the prophylactic use of laxatives could prevent postoperative symptoms associated with defecation. Blot reported a cocktail that may work [8], but further evidence especially RCTs are still needed. As we all know, opioid-induced constipation is usually present in major surgeries, though the difference between the two groups was not statistically significant in our study. However, rather than the drug we took to stop the pain, how did the pain itself affect the discomfort associated with defecation after surgery got less atten-

tion. We found postoperative pain, in particular on the first day after surgery, is significantly different between the two groups both in the univariate and multivariate analysis. It suggested that there is a strong association between postoperative pain and defecation delay. How they interacted with each other was hard to tell, and we think a decrease in activity, food intake, and on the other hand, an increase in anxiety and depression were possible causes, as Li et al reported in their work [3]. And another interesting hypothesis is that, could the postoperative discomfort associated with defecation affect the pain related to surgery? A further question is that if we relieve postoperative acute constipation, could we relieve the postoperative pain of patients at the same time? I believe an RCT about prophylactic use of laxatives and postoperative acute constipation would be of great help for us to find out the answer and will promote the development of ERAS (Enhanced Recovery After Surgery). And this is the future direction of our work. Postoperative acute constipation is common but received insufficient attention. Topics about it like the benefit and cost of prophylactic use of laxatives and the interactions between postoperative pain and constipation are interesting and with great clinical implications. It may seem trivial compared to other challenges we face but I believe it could help a lot for postoperative care of patients. But as mentioned above, there is no unified definition and solution to this problem, so we still have a long way to go.

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