

## Peer Review File

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### Reviewer A

**Comment 1:** In my opinion, it is an important topic. There are very few papers on the rationale for drain placement (and there is no). Surprisingly in many centers, drains are placed routinely. I have no idea what for. Bleeding? There are better ways to monitor patients for bleeding than drain.

**Reply 1:** Thank you for the constructive comments, we totally agree with your opinion. Drains aim at eradicating infected tissue fluids or residual blood and to alarm of undesired events such as bleeding, bile, pancreatic or bowel leak [1-3]. Recent scientific evidence suggests that drains are unnecessary after most abdominal operations [3]. Just as the reviewer said, there are better ways to monitor patients for bleeding than drain, such as ultrasonography. Nowadays, however, drains are frequently used for prophylactic purposes and served as mentally comfort.

**Changes in the text:** No change.

1. Duthie HL: Drainage of the abdomen. The New England journal of medicine 1972, 287(21):1081-1083.
2. Kim EY, You YK, Kim DG, Lee SH, Han JH, Park SK, Na GH, Hong TH: Is a drain necessary routinely after laparoscopic cholecystectomy for an acutely inflamed gallbladder? A retrospective analysis of 457 cases. Journal of gastrointestinal surgery : official journal of the Society for Surgery of the Alimentary Tract 2014, 18(5):941-946.
3. Laine M, Mentula P, Koskenvuo L, Nordin A, Sallinen V: When should a drain be left in the abdominal cavity upon surgery? Duodecim; laaketieteellinen aikakauskirja 2017, 133(11):1063-1068.

**Comment 2:** I can see the paper has been already reviewed and there are some

corrections already. I have read the paper carefully and did not find anything that might be further corrected. Therefore, I recommend the acceptance of this paper.

**Reply 2:** We sincerely appreciate the reviewer's affirmation. we sincerely thank the reviewer for their time and effort in providing feedback on our paper.

**Changes in the text:** No change.

### **Reviewer B**

**Comment 1:** In the exclusion criteria, the authors mention several factors and situations associated with difficult LTLA. Finally, the only factors that decided about the drainage remained intraoperative blood loss, time of surgery, and the intraabdominal wound size. What exactly forced the surgeon to drain, or was it more based on the experience?

**Reply 1:** Thank you for pointing this out. Whether to place the drainage is more based on the experience of the surgeon, and the surgeon makes a comprehensive judgment based on the amount of blood loss, operation time, degree of adhesion, tumor size and so on.

**Changes in the text:** No change.

**Comment 2:** There is a methodological mistake-the "drained" patients were a priori in the more difficult group, so the possibility of complications was in this group higher irrespective of drainage.

**Reply 2:** Thank you for pointing this out. we understand the reviewer's concern. In the early stage, the surgeon preferred to place the drainage, but with the increase of the experience of the surgeon, the drainage may not be placed in the later stage in the situation that was considered complicated and required to place the drainage. In our retrospective comparative study, the total complication rate in the "drain" group was higher than that in the "no drain" group, but it was mostly in Clavien–Dindo grade 1. There was no significant difference in complications between the two groups in Clavien–Dindo grade 1-5 ( $P>0.05$ ). Clavien-Dindo grade 1 complications (pain, infection and inflammation) are largely related to drainage [1, 2]. Indeed, in clinical practice, most patients are more comfortable after removal of the drainage.

1. Laine M, Mentula P, Koskenvuo L, Nordin A, Sallinen V: When should a drain be left in the abdominal cavity upon surgery? *Duodecim; laaketieteellinen aikakauskirja* 2017, 133(11):1063-1068.
2. Cerise EJ, Pierce WA, Diamond DL: Abdominal drains: their role as a source of infection following splenectomy. *Annals of surgery* 1970, 171(5):764-769.

**Changes in the text:** No change.

**Comment 3:** The left-sided adrenalectomy is usually associated with a higher possibility of postoperative complications, which may be related to the prolonged suppuration (lack of anatomical landmarks and more preparation in the retroperitoneal fat, the chance of injury to the spleen and the tail of the pancreas). From the article, we do not know if the side of adrenalectomy played any role.

**Reply 3:** We appreciate the reviewer's comments on this point. We agree with the reviewer's opinion that from the anatomical level, left adrenalectomy is usually more difficult, but the success of the operation is mainly determined by the surgical experience of the surgeon, and the postoperative recovery is related to perioperative nursing. During the operation, we dissociated along the avascular area outside the Gerota's fascia, which greatly reduced the chance of injury to the spleen and the tail of the pancreas. At the beginning of the operation, spleen-diaphragmatic ligament and the spleen-renal ligament were cut off to avoid the laceration of the spleen.

**Changes in the text:** No change.

**Comment 4:** There were no conversions in this group because converted patients were excluded from the study group (exclusion criteria).

**Reply 4:** Thank you for pointing this out. The purpose of our study was to determine whether drainage should be placed after LTLA. If there was a conversion to open surgery, it was an open adrenalectomy rather than LTLA. So according to previous studies of LTLA [1-3], we excluded patients who needed conversion to open surgery.

**Changes in the text:** No change.

1. Rodríguez-Hermosa JI, Ranea A, Delisau O, et al. Three-dimensional (3D) system versus two-dimensional (2D) system for laparoscopic resection of adrenal tumors:

a case-control study. *Langenbeck's archives of surgery* 2020;405(8):1163-73 doi: 10.1007/s00423-020-01950-8

2. Rodríguez-Hermosa JI, Delisau O, Planellas-Giné P, et al. Factors associated with prolonged hospital stay after laparoscopic adrenalectomy. *Updates in surgery* 2020 doi: 10.1007/s13304-020-00880-w
3. Major P, Matłok M, Pędziwiatr M, Budzyński A: Do we really need routine drainage after laparoscopic adrenalectomy and splenectomy? *Wideochirurgia i inne techniki maloinwazyjne=Videosurgery and other miniinvasive techniques* 2012, 7(1):33-39.

**Comment 5:** Was it possible to detect such a small amount of fluid on abdominal ultrasound (9ml) during the 1st day postoperatively with dressings on the wounds and the pain? Or the amount of fluid detected with ultrasonography was higher than in the drain?

**Reply 5:** Thank you for pointing this out. We are sorry for the unclear description in the Methods related to Postoperative Management. In the “no drain” group, for patients with abnormal abdominal physical examination or abdominal pain and discomfort, the operative field ultrasonography was performed routinely instead on the first postoperative day to detect possible fluid collection and the volume was calculated if necessary. Ultrasound was done very gently, after the examination would be re-disinfected with a clean dressing. Agrama HM et al. [1] showed that if a drain is inserted under the circumstances of no fluid in peritoneal cavity, the drain will be surrounded and occluded by omentum. As the body position changes, there may be no fluid around the drain. Therefore, the absence of blood from the drain, in some cases, cannot indicate a nonexistence of bleeding. Ultrasound can detect fluid regardless of body position.

**Changes in the text:** We have modified our text (see Page 7, line 142-145, marked in red).

**Comment 6:** In the exclusion criteria, the authors mention iatrogenic organ injury; thus they did not observe vena cava or tail of pancreas injuries in the study group.

**Reply 6:** We appreciate the reviewer's comments on this point. In the exclusion criteria, we excluded patients who presented with iatrogenic abdominal organs injury intraoperatively during LTLA, which required additional management or even conversion to open surgery. And luckily, none of our patients had vena cava or tail of pancreas injuries.

**Changes in the text:** No change.

**Comment 7:** The authors drained patients who they think should be drained because of more difficult intraoperative situation, not randomly; thus, it is expected that these patients would stay in the hospital longer, the amount of fluid would be higher, and the operation itself would be longer.

**Reply 7:** Thank you for pointing this out. We understand the reviewer's concern. In the early stage, the surgeon preferred to place the drain, but with the increase of the experience of the surgeon, the drain may not be placed in the later stage in the situation that was considered complicated and required to place the drain. Multivariate linear regression model of postoperative hospital stay showed that drain was the most significant factor affecting postoperative hospital stay. Our study is a retrospective study. In the future, prospective studies can be conducted in order to make the study more scientific.

**Changes in the text:** No change.

**Comment 8:** The problem of postoperative shoulder pain associated with pneumoperitoneum is not solved, and new articles are still emerging, so we cannot unanimously say that drainage does/does not affect the pain.

**Reply 8:** We appreciate the reviewer's valuable comments on this point. In clinical practice, most patients are more comfortable after removal of the drainage.

**Changes in the text:** No change.

**Comment 9:** The figures do not correlate with the main problem of the article-which patients should be drained?

**Reply 9:** Thank you for pointing this out. The figures are mainly to further illustrate the manipulative steps of our operation. The figures also illustrate the situation without drainage tube. With the improvement of surgical experience and the application of hemostasis techniques such as Hemolock and hemostasis double coagulation, more and more LTLA surgeries can be performed without drainage, which echoes the theme of our article.

**Comment 10:** The English language and the fluency of writing are not the paper's strong sides.

**Reply 10:** We appreciate the reviewer's comments on this point. This manuscript was previously edited by a native English speaker. If the reviewer or editor feels that further polishment of the language is necessary, we are willing to accept AME editing service.