Author’s response to reviews

Title: Robot-assisted laparoscopic antegrade versus open inguinal lymphadenectomy: A retrospective controlled study

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Version: 1 Date: 18 Jul 2019

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Nick A. Watkin (Reviewer 2):

1. There is no detail of the type of incision or surgical technique of the open group. (Subjects and methods section, line 5-6 page 4) The open inguinal lymphadenectomy was performed via the (inverse) S-shaped inguinal incision. While the robot-assisted surgical procedure was as follows.

2. It is not clear if the Robotic data was collected as part of a prospective study. The data of robotic was retrospective.

3. There is no detail in either group of the incidence of lymphocele, lymphedema of the lower limbs or genitalia and medium to longer term incidence of cellulitis in either group. (Results section, line 5-16, page 7) For the 20 sides in the open surgery group, 9 sides (45%) had skin-related complications, including skin necrosis, wound inflammatory exudation and cellulitis with different severity. When necessary, the negative pressure suction or flap transplantation were conducted for the infected or non-healing wound. In the robot-assisted group, stitches were removed for all nine patients around seven days post-surgery. There were no complications such as skin necrosis, delayed wound healing and cellulitis. The lymphatic complications of two groups occurred slightly, which had a good outcome after proper treatment. In the open group, lymphorrhagia occurred in 4 cases, and lower limbs edema occurred occasionally in 1 case after too much physical work. In the robot-assisted group five patients had lymphatic leakage in the inguinal region, which resolved after appropriate treatments such as pressurization and drainage. Lymphocele occurred in one post-discharge patient, which was cured by...
4. There is no evidence of consent or ethics committee approval
(Declarations section, line 21-23, page 11)
The current study was reviewed and approved by the institution ethical committee (IEC) of the Fourth Medical Center of PLA General Hospital (2019KY015-HS001). All participants provided written consent to participate in this study.
5. There is no evidence on the training of the surgeon/surgeons who performed the procedures
The surgeon acquired the certificate of robotic surgery in 2007. And robotic inguinal lymphadenectomy was demonstrated to be safe and feasible by several studies (see details in discussion section). And, unlike the earlier studies, we took the antegrade approach. We also did enough work and efforts for the operation, for example the related anatomical knowledge, management of complication and so on. In view of the above, we may have the capacities and qualifications to perform the surgery.
6. The groups are small but probably sufficient for the robotic group to be considered as a point of technique.
Robot-assisted laparoscopic antegrade inguinal lymphadenectomy is safe and feasible with the same efficacy on tumor control and fewer postoperative wound complications comparing the open surgery.
7. I do not think that the paper should attempt to compare with a small number of historical controls: it should restrict to the technique and a full inclusion of all complications not just skin related.
It is really true as Pro. Nick A. Watkin suggested. At first the paper just introduced the technique of the Robot-assisted laparoscopic antegrade inguinal lymphadenectomy for penile cancer. Someone doubted that if robotic surgery had the same efficacy on tumor control, so a retrospective controlled study with small sample was conducted. More clinical data and prospective study were needed to support the conclusion. As is known, the skin related complication (skin necrosis, delayed wounded healing) has about 50% incidence in the open surgery, which needs long-time treatment and nursing and also influences the follow-up chemotherapy. However, the robotic surgery had a great disadvantage on the skin related complication. For the fact above, we ignored the description of other complication. Thank for reminding of this, other complications have been added to the description.

Nicola Nicolai (Reviewer 3) :
There is no information about:(Thank Pro. Nicola Nicolai for the advice, we have made amendments in the manuscript as follows)
lymph node status after surgery (pN); the state of the pelvic lymph nodes;
(Results section, line 3-5, page 7)
The postoperative pathological N staging of the robotic-assisted group were pN0, pN1, pN2, pN3 in 2, 2, 4 and 1 patients, and the open group were pN0, pN1, pN2 in 1, 1, and 8 patients.
disease relapses in relation to the clinical and pathologic stage of disease;
(Results section, line 24-25, page 7)
Of the two groups, all the six cases with recurrence or metastasis had a staging of pN2 or pN3, while other fourteen cases with pN0 or pN1 had no recurrence and metastasis.
lymphatic complications in robotic and open series.
(Results section, line 10-16, page 7)
The lymphatic complications of two groups occurred slightly, which had a good outcome after proper treatment. In the open group, lymphorrhagia occurred in 4 cases, and lower limbs edema occurred occasionally in 1 case after too much physical work. In the robot-assisted group five patients had lymphatic leakage in the inguinal region, which resolved after appropriate treatments such as pressurization and drainage. Lymphocele occurred in one post-discharge patient, which was cured by puncture and continuous drainage. No genitalia lymphedema was observed in both groups.
A better description of the recurrences and the type of these is necessary.
All the six patients of two groups, dying of tumor progression, developed inguinal and pelvic lymph nodes recurrence or metastasis, leading to extensive abdominal metastasis with cancer cachexia. The different follow-up times between the open and robotic series make a comparison, even if historical, non-transparent. The surgeries of two groups had been completed in different time periods, which caused the different follow-up times. According to the data we collected, the recurrence and death in our study usually occurred in a short time period after operation. The different follow-up times might have no influence on the result of the comparative statistical analysis. Some passages are inconsistent with the available knowledge: it appears that the authors have performed pelvic lymphadenectomy in patients with at least two inguinal lymph nodes which were positive at frozen sections or in the patient with lymph node package: what about the clinical disease stage N3?

Clinical disease stage N3 contains two conditions: fixed inguinal nodal mass and pelvic lymphadenopathy, unilateral or bilateral. For the former, open inguinal lymphadenectomy on ipsilateral side and robotic contralateral inguinal and pelvic lymphadenectomy were performed after neoadjuvant therapy. For the latter, the cases may have poor prognosis, which were excluded in the study. It is not clear how a low-fat diet should decrease lymphatic secretion from the lower limbs. Some researches[1][2] reported that conservative therapy with low-fat diet, medium-chain triglyceride diets may be the mainstay treatment for mediastinal, retroperitoneal or abdominal cavity. But, till now there is no evidence to prove that the treatment above is effective for inguinal lymphatic leakage. More clinical studies and data are needed to confirm it.