Peer Review File

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Reviewer A

Need better clarification on what anatomic factors made transperineal drainage unsuccessful vs transrectal approach. Was ultrasound guidance used? Was the mass palpated prior to drainage when going transrectally? In same vein, why would transperineal approach be offered again to the patient after initial aspiration if it could not even be performed the first time?

How much cyst wall was marsupialized? Was origin of cyst able to be visualized during robotic approach? Is there concern for future cyst growth given persistent remnant?

Was colorectal surgery involvement expected preoperatively or was it an intraoperative consult?

The literature review was good, however manuscript would benefit from a better description of the robotic surgical technique. It's very superficial at this time. Can also describe how approach differs from open, challenges, risks/benefits of both head-to-head.

Needs a thorough revision given redundancy of thoughts, some grammatical errors as well.

Reply

Comment 1: Need better clarification on what anatomic factors made transperineal drainage unsuccessful vs transrectal approach
Reply 1: The angle needed to reach the cyst was not able to be performed from a transperineal approach.
Changes in the text: I have clarified that the “anatomical difficulties” to reflect the difficulty in reaching the mass from the perineum (see Page 4, line 156-158)

Comment 2: Was ultrasound guidance used?
Reply 2: Ultrasound guidance was used during both the transperineal and transrectal approaches.
Changes in the text: I have added the use of ultrasound to the manuscript in our case report section (see Page 4, line 157).

Comment 3: Was the mass palpated prior to drainage when going transrectally?
Reply 3: The mass was palpated prior to transrectal drainage, demonstrating a large pelvic mass in the anterior rectal wall on EUA.
Changes in the text: I have addended the manuscript to reflect this change (see Page 4, line 158-159)

Comment 4: Why would transperineal approach be offered again to the patient after initial aspiration if it could not even be performed the first time?
Reply 4: This was a mistake during the write-up. We offered repeat transrectal aspiration. I appreciate that you were able to catch this as I want this to be an educational, rather than confusing, report on a relatively new approach to treating MDCs.
Changes in the text: I have corrected this to say that we offered repeat transrectal drainage (see Page 5, line 166).

Comment 5: How much cyst wall was marsupialized?
Reply 5: About 90% of the cyst wall was removed during the procedure. After which the remaining cyst wall was marsupialized and oversewn using 2-0 suture.
Changes in the text: I have addended the manuscript to reflect this change (see Page 5, line 187).

Comment 6: Was origin of cyst able to be visualized during robotic approach?
Reply 6: The origin of the cyst was unclear at the end of the procedure.
Changes in the text: I have added this information to the case report. (see Page 5, line 186)

Comment 7: Is there concern for future cyst growth given persistent remnant?
Reply 7: There is always a concern for future cyst growth; however the persistent remnant on MRI was the remaining cyst that was densely adhered to the right ureter and portion of the anterior rectum which was eventually marsupialized. Since this portion of the cyst is now essentially continuously draining after being marsupialized, the chance of growth and reformation is much lower.
Changes in the text: I have addended the manuscript to reflect this change (see Page 5, line 198-200).

Comment 8: Was colorectal surgery involvement expected preoperatively or was it an intraoperative consult?
Reply 8: The colorectal surgeon was contacted intraoperatively as we were not expecting the cyst to be densely adherent to the rectum. Due to concern for perforation, we consulted the colorectal surgeon to evaluate the rectum.
Changes in the text: I have clarified the colorectal surgeons involvement as well as the timeline in the case report (see Page 5, line 180).

Comment 9: Manuscript would benefit from a better description of the robotic surgical technique.
Reply 9: I understand the importance that the better description will help as we believe that complex MDC may be best treated with robotic management. In having a better description, I hope that others can use our technique to guide future procedures.
Changes in the text: I have updated the case report to have a more in depth description of our robotic case. (see Page 5, line 168-189)

Comment 10: Describe how approach differs from open, challenges, risks/benefits of both head-to-head.
Reply 10: In the literature, open Mullerian Duct cyst excision has been described through a midline suprapubic incision with transperitoneal access. Risks of this approach include poorer exposure and higher risk of damaging other nearby structures such as bladder. Benefits include potentially shorter learning curve and lower operative time.
Changes in the text: The information was previously included; however, to make a better head to head visual for the reader, I have included table 2 to summarize the benefits and risks of each procedure. (see Page 9, line 295-296)

Comment 11: Needs a thorough revision given redundancy of thoughts, some grammatical errors as well.
Reply 11: I appreciate this comment, as I want the readers to be able to fully invest into the text without the distraction of simple grammatical mistakes.
Changes in the text: I have removed several redundant results in the case report, including overlapping results from imaging. I additionally eliminated repeated phrases that were found throughout the paper to eliminate redundancy.

Reviewer B

Are the contents of the cyst spread into the abdominal cavity? Is it safe because it is not cancer?
Was percutaneous aspiration with robot-assisted visualization possible?
What were the difficulties compared to RALP?
I think it would be good to have a longer follow-up of symptoms and images because there was some residual disease.

Reply

Comment 12: Are the contents of the cyst spread into the abdominal cavity?
Reply 12: At one portion of the case, the cyst contents were entered inadvertently and 600 mL of

fluid were aspirated, but there was a small portion of the cyst that was introduced into the peritoneum given we used a transperitoneal approach to access the posterior aspect of the cyst. However, insignificant outcome as cyst was benign.
Changes in the text: I have addended the manuscript to reflect this change on line (see Page 5, line 182-183)

Comment 13: Is it safe because it is not cancer?
Reply 13: Yes, our approach is safe. Previous cases in the literature have reported an open surgical excision for refractory symptoms and size. We confirmed the benign nature of the cyst via transurethral drainage prior.
Changes in the text: I have addended the manuscript to reflect this change on line (see Page 5, line 177).

Comment 14: Was percutaneous aspiration with robot-assisted visualization possible?
Reply 14: We did aspirate the cyst intraoperatively via robotic visualization, but cyst excision was pursued for maximal benefit to the patient.
Changes in the text: I have addended the manuscript to reflect this change (see Page 5, line 177).

Comment 15: What were the difficulties compared to RALP?
Reply 15: There were no any particular difficulties compared to a RALP. Port placement was the same. The most difficult aspect of the case was dissecting the adhered aspects of the cyst from the right ureter and rectum. However, similar surgical principles used during other robotic cases were employed.
Changes in the text: I have addended the manuscript to reflect this change (see Page 7, line 238-242).

Comment 16: it would be good to have a longer follow-up of symptoms and images because there was some residual disease
Reply 16: As of two years, the patient has not reported signs or symptoms of recurrence. There has been no further imaging since the last CT scan provided in the case report.
Changes in the text: I clarified that as of two years that the patient has remained asymptomatic (see Page 5, line 201-202).