Author’s response to reviews

Title: Shearing-Force Injury of a Kidney Transplant Graft During Cesarean Section: A Case Report and Review of the Literature

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Response to Reviewers

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Dear Editorial Board,

Thank you for the thoughtful comments on our manuscript and the opportunity to re-submit for publication in BMC Nephrology. Please see our responses to reviewer comments below.

Sincerely,

Catherine Gordon
Vasiliki Tatsis
Reviewer 1:

- The authors are reporting one single-case of an injured transplant graft. Due to this case, I would not draw any conclusions, especially not giving any recommendation concerning the incision. It is well known that a horizontal Pfannenstiel incision is superior to the vertical incision that the authors do recommend in this context, e.g. due to wound healing and cosmetic reasons. I would therefore soften the conclusion, as well as the title of the paper. The title could e.g. be adapted to "Shearing-force injury of a kidney transplant graft during cesarean section: a case report".

Please see changed title and edited abstract and conclusion section.

- There is an impressive body of literature available regarding pregnancies and deliveries after renal transplantation. One study in particular reports on "ultra-high-risk pregnancies" (Farr et al. EJOGRB 2014), where e.g. women after renal transplantation plus e.g. placenta percreta, twins, previous cardiac transplantation, etc. undergo uneventful c-section. I would include this reference and refer to their patients, as well as to the methods they used, including preoperative MRI to better plan the c-section.

Please see the fifth paragraph of the discussion and new references #8 and #9.

- At our department we routinely (i) read the operation report of the kidney transplantation, (ii) perform ultrasound to better localize the graft, and - if necessary - (iii) perform MRI to better localize the graft. This is part of the preoperative counseling to better plan the c-section and avoid complications. This point should be highlighted in the manuscript, rather than giving a recommendation for a vertical incision.

Please see edited discussion section to reflect these recommendations.

- More literature regarding c-section incisions (Pfannenstiel vs vertical) should be included, to extend the case-report to a "case-report and review of the literature" article. This is currently lacking in this context.

Please see the fourth paragraph of the discussion section.

- I would appreciate the perinatal and neonatal outcome parameters in a table.

We have added the infant Apgars and weight to the text. Can you please clarify what other information would be of use? Thank you.

Natalia Mazanowska (Reviewer 2): The case reported is a very rare complication of cesarean delivery in kidney graft recipient. There are only single case reports in published literature on
this topic probably because of rarity of such event and not really because of underreporting as the authors suggested.

Given the accidental nature of graft injury resulting from intraabdominal adhesions during surgery it is hard to propose for all graft recipients a midline incision as the authors suggested. Midline incision during cesarean section may result in higher rate of complications such as wound disruption and hernia, that are already a concern in transplant recipients on chronic immunosuppressive therapy.

Interestingly in the case reported the pregnant graft recipient after two cesarean sections in the past was not scheduled for a planned cesarean delivery, especially as the patient was not willing for the trial of labour. It is well known that a planned cesarean carries a lower risk of complications. Therefore it would be prudent to schedule a planned surgery allowing for scheduling an experienced surgeon and having time for meticulous dissection in case of unexpected intraabdominal adhesions.

Thank you for the comments. We have edited the manuscript per other reviewer recommendations to be more informative of a possible complication and offer less of a recommendation on incision. Instead we comment that providers can consider a midline vertical incision, but the most important thing for providers is to have comprehensive pre-operative planning.

Osama Ashry Ahmed Gheith (Reviewer 3): Dear Sir

I have some comments for authors:

-Authors did not mention parity of such lady and how many children she had? And was she counselled for being pregnant after transplantation or not.

We mention the gravity and parity of the patient as a G4P2012 so she has had two prior term deliveries with two living children. There was no note on the chart regarding counseling following her transplant.

-what was the indication of repeated CS in such case and if there was any complications after previous CS?

The repeat C-section was indicated because she declined a Trial of Labor after Cesarean section. There were no complications in her previous C-sections. The text has been edited to demonstrate this.

-What about the details of her antenatal care especially follow up abdominal US to evaluate the kidney graft?
Minor English mistakes will need some careful revision.

There is no note in the chart regarding abdominal ultrasound during the pregnancy to evaluate the transplant kidney. We do not typically do this unless there is evidence of graft failure (ie. oliguria, rising creatinine). We did evaluate for the location of the transplant kidney prior to taking her to the operating room. The text has been edited to reflect this.