Author's response to reviews

Title: Ureteroscopy assisted retrograde nephrostomy (UARN) for lower calyx calculi in horseshoe kidney.

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Author's response to reviews: see over
Dear Editor, Journal of Medical Case Reports.

MS:1856097632650001 entitled "Ureteroscopy assisted retrograde nephrostomy (UARN) for lower calyx calculi in horseshoe kidney." By Takashi Kawahara.

Thank you for your letter concerning the above-mentioned manuscript. I received your letter on Feb 16 and now I have revised the manuscript. I am pleased to note the favorable comments of the reviewers and have made correction which I hope meet their approval.

Journal of Medical Case Reports: Answer to reviewers’ critiques

Reviewer: 1
Comment1
Somewhat, however it is unclear why this technique was required for these patients when there are very straightforward methods to obtain access into a horseshoe kidney and easier to perform than UARN

Thank your for your comment. As you pointed out, making percutaneous nephrostomy might be possible and easily performed. In the previous report, PCNL was safe and established procedure, however, sometimes encounter severe complication required blood transfusion. In our institute, URS was sometimes successfully treated for renal calculi in the lower calix in horseshoe kidney. So, we usually positioned in Galdakao modified Valdivia position and firstly performed URS. Moreover, UARN was able to control the puncture spot accurately. The, we performed UARN in this case. We discussed these information in the revised text in the discussion section.

Comment2
There are several blanks (xxx) in the text that are missing information and history

Thank you for your comment. We added the information instead of blanks. We deeply appreciated you pointed out our mistakes.

Comment3
Several statements
made in the paper are not well -- supported in the urology literature
- it is not clear to me why stents were placed preoperatively
- it is not clear to me how the placement of a stent prevented the placement of a ureteral access sheath at the time of the surgery and it is unclear why a ureteral access sheath is required for this case
- images of the retrograde pyelogram would have been useful
- why was the percutaneous access not performed with fluoroscopic or ultrasound guidance alone?
- although UARN can aid in accessing the desired calyx (under direct vision), I am not certain it is really helpful in the cases presented
- there is no strong evidence that allows the authors to state that this technique (UARN) leads to less radiation exposure, less blood loss, and shorter procedure. Will the case report make a
difference to clinical practice?

We appreciate your comments. We added these information in the revised manuscript as follows.

- it is not clear to me why stents were placed preoperatively

Thank you for your comment. In our institute, for large renal stone, we sometimes insert preoperative stenting to contribute inserting large caliber UAS. So, in one case, we insert prestenting. We added these information in the revised text.

- it is not clear to me how the placement of a stent prevented the placement of a ureteral access sheath at the time of the surgery and it is unclear why a ureteral access sheath is required for this case

Thank you for your comment. The reason for inserting UAS was same as the reason for the answer for Comment 1. We address the reason in the revised manuscript.

- images of the retrograde pyelogram would have been useful

We appreciate your advice. We added the pyelogram in the revised figure. Thank you for your suggestion.

- why was the percutaneous access not performed with fluoroscopic or ultrasound guidance alone?

Thank you for your comment. As you pointed out, percutaneous access would be possible under fluoroscopic or ultrasound guidance. However, UARN facilitates the sensitive control the target calix. And we speculate that appropriate puncture spot contribute the success of stone removal. We discussed in the revised text.

- although UARN can aid in accessing the desired calyx (under direct vision), I am not certain it is really helpful in the cases presented

Thank you for your comment. The reason for performing UARN was same as the reason for the answer for Comment 1. We address the reason in the revised manuscript.

- there is no strong evidence that allows the authors to state that this technique (UARN) leads to less radiation exposure, less blood loss, and shorter procedure. Will the case report make a difference to clinical practice?

Thank your for your comment. As you pointed out, we lack the evidence of lower radiation exposure, less blood loss and shorter operation time in these two cases. We eliminated these information.

Reviewer2
Comment1

A very short description of the technique (1-2 sentences) should be included in the abstract. Otherwise the reader is unable to understand what the paper is all about by simply reading the abstract. General information like the incidence of horseshoe kidney is not necessary in the abstract and can be omitted.

Thank you for this pointed out. We rewrote the abstract in the revised manuscript. And we have eliminated the general information of the incidence of horseshoe kidney.
Comment 2
In the section Case Presentation for case 1, immediately after the figures, the sentence “He had a history of xx at the age of xx” should be corrected.

We appreciate your advice. As you pointed out, the manuscript lacked these information. We appreciate you pointed out our mistake.

Comment 3
In horseshoe kidney the posterior row of calyces point dorsomedially and the lateral row dorsolaterally. Therefore in antegrade percutaneous access the entry point is generally in a lower and medial position compared to normal kidneys. The authors report that in their technique the skin “entry point” is at the posterior axillary line. Don’t you think that for horseshoe kidney this gives a longer and (perhaps) “curved” access tract compared to an antegrade puncture? Add a small comment.

We appreciate your comment. As you pointed out, percutaneous access is appropriate lower or medial in general. In these cases, puncturing lower calix might be suitable. However, supported by URS findings, we determined the puncture spot as in the upper calix where nephroscope could reach to the target stone easily. We added these in the revised manuscript.

Comment 4
Due to downward displacement of horseshoe kidneys antegrade percutaneous upper polar access is usually achieved through an infracostal puncture which is relatively safe away from the pleura. Even if the upper calyx lies supracostally, by using a slight upward angulation of the needle an infracostal access is still feasible. Using the retrograde ureteroscopically assisted percutaneous access how can one achieve an infracostal access when the upper calyx lies above the 12th rib? Add a small comment.

We appreciate your comment. To perform UARN, it is the most important point to care. We performed preoperative CT in all cases and US was performed before puncturing to avoid injuring the surrounding organs. And more, we puncture under fluoroscopic guidance to avoid injury. In our institute, more than 40 patients were performed UARN and we avoid above the 12th rib successfully using fluoroscopic guidance. We added the figure of retrograde puncture of fluoroscopic guidance and added these discussion in the revised manuscript.

Comment 5
The stone analysis in case 1 is not provided

Thank you for your advice. We added the information of stone analysis in case one. We deeply appreciate you pointed out our mistake.

Comment 6
The incidence of horseshoe kidney is given as 0.25% in the Introduction and as 0.025% in the Discussion. This piece of information should be given only once and correctly. I suggest eliminating it from the Discussion.

Thank you for your comment. As you pointed out, we eliminated it from Discussion. And we corrected the information about the incidence of horseshoe kidney in the revised manuscript.
The ureteroscopically assisted retrograde nephrostomy obviously provides less radiation exposure than ultrasound- or fluoroscopy-assisted renal access. However the statement that it provides less bleeding and a shorter operating time is not supported by the data of this paper and I am not sure that these are true at all. I suggest eliminating “less bleeding” and “shorter procedure” from the last paragraph of the Discussion unless you can explain these in detail.

We appreciate your advice. As you pointed out, we did not describe the data of less bleeding and less radiation exposure. So, we eliminate the sentences about bleeding and operation time.

I would like to thank the reviewers for their helpful comments, and hope that the revised manuscript is acceptable for publication in Journal of Medical Case Reports.

Yours sincerely,

Takashi Kawahara