Author’s response to reviews

Title: Technical considerations and Outcomes for Ileal Ureter Replacement: A Retrospective Study in China

Authors:

Wenlong Zhong (zwl0929@foxmail.com)
Peng Hong (hppkusteven@163.com)
Kunlin Yang (yangkunlin12345@163.com)
Xuesong Li (pineneedle@sina.com)
Junsheng Bao (bjshurol@sina.com)
Guochang Bao (baoguochang1968@sina.com)
Liang Cui (cui_leon@163.com)
Changping Men (mchp001@sina.com)
Zhe Li (13501236134@163.com)
Peng Zhang (punky_bird@hotmail.com)
Ning Chu (54surgeon@sina.cn)
Liqun Zhou (zhoulqmail@sina.com)

Version: 2 Date: 17 Jun 2018

Author’s response to reviews:

Reviewer #1:

Q1: In the Surgical Technique they did not refer to their previous study.

A1: Sorry for our ignorance. We have added our previous study which we referred to in the “Surgical Technique” section. The study is “Liu P, Wu X, Zhu YZ, Tang Q, Fang D, et al. [Ileal ureteric replacement for iatrogenic long segment ureteric injuries]. Beijing Da Xue Xue Ba Yi Xue Ban 2015; 47: 643- 7.”
Q2: In the Results section, the number in brackets in the sentence "Urinary infection was identified…" are not clear.

It is not clear the sentence "Two patients eventually required surgical intervention…"

A2: We are very appreciated with your advice and agree with it. And we have revised the two sentences.

- the number in brackets in the sentence "Urinary infection was identified…" means that “3 patients, 13.0% of patients, suffered from urinary infection”. And 11.1% is a miscalculation, and the correct percent is 13.0%. Thus, the sentence has been changed to “Urinary infection was identified as the most common complication, with 3 patients (13.0%) suffering from urinary infection.”

- "Two patients eventually required surgical intervention…” means that “Two patients presented incisional hernia and required repair surgery”. And this sentence has been changed to “Two patients presented incisional hernia and underwent hernia repair surgery.”

Q3: In the discussion section the following sentences are grammatically incorrect:

"The average creatinine levels preoperative…"

"and nonurological surgery iatrogenic injury in cases 16 (17.6%)"

A3: Sorry for our mistakes. We have revised these sentences.

-"The average creatinine levels preoperative…” was in the Results section and has been changed to "The average creatinine levels before surgery, 1 month after surgery, and at the last follow-up visit were 1.18 (0.79–1.92), 1.07 (0.57–2.60), and 1.03 (0.76–1.69) mg/dL, respectively”

-"and nonurological surgery iatrogenic injury in cases 16 (17.6%)" has been changed to "nonurological surgery in 16 cases (17.6%)”. And the order of this sentence was adjusted. The revised sentence is as follow: “The main indication for ureteral replacement was iatrogenic injury involving genitourinary surgery in 29 cases (31.9%), nonurological surgery in 16 cases (17.6%), and radiation induced stricture in 17 cases (18.7%).”

Q4: Please clarify this sentence: "a negligible number of patients reported small bowel-related complication". Which kind?

A4: Thanks for your advice. What we intended to present through this sentence is that only one patient suffered from ileus and was treated with conservative therapy. And the other patients in
our study did not report small bowel-related complications. We think that “a negligible number of” may cause misunderstanding, and this sentence has been changed to “few patients reported small bowel-related complication”.

Q5: Please comment why in 8 cases of distal or mid-distal ureter injury it was inadequate only an ureteral reimplantation with Boary Flap.

A5: We are very appreciated with your suggestion, and it is meaningful. The length of ureter injury in 8 cases of distal or mid-distal ureter were more than 15 cm (Supplementary table 1). We thought that Boari Flap may not reach tension-free anastomosis. Thus, based on patients’ situation, we chose ileal ureter replacement.

Q6: Please the authors explain the possible alternative treatments to Ileal Ureter Replacement.

A6: The possible alternative treatments to ileal ureter replacement includes renal autotransplantation, transureteroureterostomy, and Boari flap-psoas hitch.

Renal autotransplantation has been used for high ureteral injury since 1963. However, there have always been concerns about the technical complexity, vascular complications, and poor perfusion problems during the procedure.

Transureteroureterostomy is a reconstructive option that bypasses a diseased distal ureter without compromising the recipient ureter. Despite its early introduction in 1934, transureteroureterostomy has not been adopted as the first-line procedure for the anastomotic complications as there is concern for injuring the contralateral ureter.

Boari flap-psoas hitch is a combination of Boari flap and psoas hitch. Boari flap was first performed to bridge a loss of distal ureteral defect in humans by Ockerblad in 1936. Published studies have shown encouraging outcomes after using this technique. It can repair 12 to 15 cm long ureter defect, but for longer ureteral defects, tension-free anastomosis is difficult to safely execute in a single procedure. Thus, in 1973, Kelami et al initially attempted to combine Boari flap and psoas hitch technique to treat long segment ureteral defects. After the psoas hitch was completed, the bladder flap was developed with its base at the psoas hitch. Using this technique, the upper ureteral loss could be repaired, but it remained inapplicable to the replacement of more extensive ureteral defects.

Owing to spatial confined, our paper does not contain the detailed descriptions for the possible alternative treatments to ileal ureter replacement
Q7: In table 2 sentences are grammatically incorrect:

A7: We are appreciated with your suggestion and agreed with it.

- "Leakage uretero-ileal anastomosis (Grade 2)" is revised. And the new sentence is “ureteroileal anastomosis leakage (Grade 2)”. 

- "Conservative therapy including fast, decompression, anti-infection and balance of electrolytes" has been changed to “conservative therapy, including fast, decompression, anti-infection and balance of electrolytes”.

Reviewer #2:

Q1: Defining clearly the aim of the study.

At present, the reader might get the impression that it aims to "present a retrospective experience among Chinese patients with long ureteral injuries".

I doubt whether the authors really meant that this population is different from others such as African, Caucasian etc., and eventually intended to focus on its uniqueness regarding the clinical presentation, surgical course and post-operative outcome,

A1: We are very appreciated with this important suggestion and agree with it. According to previous study, no evidence exist to show the difference between Chinese patients and others in clinical presentation, surgical course and post-operative outcome. And to date, there has been few studies of ileal ureter replacement from China. Our aim is to present our experience and technical considerations in ileal ureter replacement, besides, we also want to show Chinese urologists’ experience in this aspect. In order to avoid misunderstanding, we have changed our title to “Technical considerations and outcomes for ileal ureter replacement: a retrospective study in China”. And in the third paragraph of “Background”, the sentence “we describe our technical considerations in ileal ureter replacement and present a retrospective experience among Chinese patients with long ureteral injuries” has been changed to “we describe our technical considerations in ileal ureter replacement and present a retrospective experience among patients with long ureteral injuries in China.”

Q2: Giving the precise clinical data regarding the patients included in the study, including the exact position and the measured length of the damaged ureter. In the literature*, it is clearly stated that the procedure should be spared for "Delayed ureteral repairs, especially when a very long segment of ureter is destroyed…". In the present series, the injuries were limited to the
proximal-mid ureter (8), mid ureter (2), distal-mid distal (8) and in the full length only in 5 cases. A detailed description of the severity of the damage might rule out the possible suspicion of over-usage of this technique, even in cases, which might have been corrected by simpler procedures.

A2: We are grateful for your suggestion and agree with it. The precise clinical data regarding the patients are listed in Supplementary Table 1, and we add description in the results section. And we reviewed our data to evaluate the severity of the damage. According to the situation of ureteral defects, we thought that ileal ureter replacement was the best choice to reconstruct the urinary tract and reach a tension-free an anastomosis.

Q3: Focusing on the surgical technical aspects of the procedure, mainly on the implication of the anti-reflux reimplantation of the ureters in the vast majority of the cases and on the consequent advantages.

A stronger message regarding the possible superiority of the anti-reflux reimplantation of the ureteral segment is important as it is recognized in the literature* that "No sufficient clinical data exist to establish the superiority of a tapered segment, a nonrefluxing anastomosis, or a shorter, segmental replacement over a standard ileal substitution".

A3: We are very appreciated with this important suggestion and agree with it. It is controversial whether an anti-reflux technique is necessary. Verduyckt et al1 and Waldner et al2 believed that anti-reflux technique was not always necessary. However, we routinely used a distal anti-reflux valve for the antireflux procedure. And no cases of postoperative reflux were reported. We believe that the antireflux procedure should be recommended for patients without renal stones.


The Supplementary Table 1. has been included as a supplementary file.