Reviewer's report

**Title:** Laparoscopic versus open catheter placement in peritoneal dialysis patients: A Systematic Review and Meta-Analysis

**Version:** 1  **Date:** 15 January 2012

**Reviewer:** Shyh-Chuan Jwo

**Reviewer's report:**

Comments to the Author:

In this meta-analysis, the authors attempted to clarify whether laparoscopic catheter placement is superior to conventional open methods for peritoneal dialysis (PD). Various catheter designs and modified implantation techniques have been developed for both laparoscopic intervention and the conventional open method to reduce the potential risk of complications; however, catheter migration and related infections and dialysate leakage are worrisome complications because they are not only attributed to the initial implantation techniques but also implicated in aseptic usage of patients, long-term indwelling catheter, and change in the intraperitoneal environment after catheter implantation. Some clinicians believe that the early complications are more often related to the various catheter-implantation techniques.

Specific Comments:

**Major Compulsory Revisions**

1. I do not agree with your discussion in the “limitations of this study”, because not all the studies had a larger proportion of patients with a history of abdominal surgery in the laparoscopic group (e.g. reference 3 shown in Table 1). In addition, a small sample size does not justify the lack of familiarity with catheter implantation techniques. To my knowledge, most authors cited in your references are familiar with catheter implantation using either laparoscopic or open methods.

2. The cited references are questionable in the Results section, page 7, sub-heading 3.2 (Study Quality), “[4, 6]” and on page 9, sub-heading 3.3.2 (RCTs, subgroup analysis), “[5, 10, 14]”. On the basis of my understanding of the manuscript, the method of sequence allocation concealment is also used in reference 3 but the RCTs do not include references 10 and 14.

3. The word “relapse” is rather ambiguously used in the last sentence of the Conclusion section. Please clarify.

**Minor Essential Revisions**

1. Typographic errors should be carefully revised. For example, in the Materials and Methods section, page 5, sub-heading 2.3 (Exclusion criteria), “Studies” should be corrected to “studies” and in the Results section, page 8, sub-heading 3.3.1 (Observational studies), “exit and” should be corrected to “exit site and”. Besides, the language in this manuscript should be checked and corrected by a
native English-speaking specialist.

Discretionary Revisions

1. It is common knowledge that procedure-related early peritonitis can be prevented by the use of prophylactic antibiotics in PD patients, but most cases of peritonitis involve late-onset catheter-related peritonitis and are frequently related to the contamination caused by catheter usage or enteric bacterial translocation after initial catheter implantation. The authors have not clarified this issue in the analysis and discussion.

2. The question of when to begin PD is another issue that needs further investigation, and the authors have not analyzed it here. It is established that a delayed start (#1 week) can help avoid exit-site/subcutaneous tunnel infection and dialysate leakage in early non-healing wounds, but it is still doubtful for the prevention of peritonitis that you have not discussed in the text.

3. How did you analyze the data obtained by Crabtree et al. (table 1)? Crabtree et al. further classified the laparoscopic procedures into basic and advanced procedures according to accessory procedures of rectus sheath tunneling, selective prophylactic omentopexy, and selective adhesiolysis. They compared the complications of these 2 types of laparoscopy and showed that the overall complication rate in basic laparoscopy was equivalent to that in open surgery but was much higher than that in advanced laparoscopy (ref. 10).

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.