Reviewer's report

**Title:** Short term and long term results after open vs. laparoscopic appendectomy in childhood A subgroup analysis

**Version:** 2  **Date:** 4 July 2013

**Reviewer:** Oliver Muensterer

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This is a 7 year follow up and comparison of a robust number of pediatric patients who either underwent open or laparoscopic appendectomy by the same group of surgeons. The strengths of the study are the relatively large study cohort, the long follow-up time, and the relatively good recall rate. The disadvantages include the lack of randomization, the use of a possibly non-validated (?) questionnaires, and non-validated scar assessment.

Abstract: In the first paragraph, I would change the introduction to "Although laparoscopic appendectomy is becoming standard of care in many places, there is still debate about the long-term advantages in terms of quality of life."

In the Surgical procedure section, page 4, I don't think the statement can be made that selection bias was reduced because each of the surgeons performed both LA and OA. Since the mode of operation was arbitrarily decided upon by the surgeon and not randomized, it could have been that the surgeons performed OA in the sicker patients, or at night when equipment or the team was not available. I would leave this sentence out.

It doesn't seem practical to categorize the appendicitis by 4 different stages. I would combine them into either simple appendicitis or complex (perforated) appendicitis, and other diagnoses such as ovarian pathology. This is what most researchers do nowadays.

Is the SF-36 a validated, standardized questionnaire? In this case, it should be referenced. This would greatly increase the power and generalizability of this study.

The ethics section can probably be shortened and condensed to the statement that standard ethics procedures of the hospital were followed and informed consent of the participants was obtained.

In Short Term Results, I would simply state that the conversions were due to technical difficulties during the procedure, and not "necessary" because of peritonitis (not a universally accepted criterion for conversion) or because the situation could not be "handled" laparoscopically (perforation is usually not a reason for conversion with experienced surgeons who have done more than 100 lap appendectomies).
Table 2 describes "port intussusception". I am unfamiliar with this term. Do the authors mean "port site hernia"? If so, I would suggest the latter, more common term.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I have no conflicts of interest