

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Recently, PCOS is a common endocrine disease in young women, with a prevalence rate of 5-18%, which is closely related to obesity and can significantly affect the metabolic, endocrine and reproductive functions of patients. To address this challenge, in this study, the authors aimed at to evaluating the therapeutic efficacy of LSG on women with polycystic ovary syndrome. The authors used primary clinical data, surgical method, observation index, and statistical analysis to verify their hypothesis. The results showed that LSG can improve hyperandrogenemia and irregular menstruation in obese patients with polycystic ovary syndrome, significantly lose weight and improve a series of complications related to polycystic ovary syndrome. So, in my opinion, this paper is well-written. The experimental design is reasonable, and the results reflects the conclusion as well. I recommend its acceptance after the minor revision. The detailed comments

- 1) In the section of Background, the authors claimed that the efficacy and mechanism of laparoscopic sleeve gastrectomy (LSG) for obesity with PCOS are unclear. Since this paper only focused on the efficacy of LSG, this sentence is somehow exaggerated and should be rephrased.
- 2) It is better for the to add a table of Basic Data of the patients in this retrospective analysis, including their ages, marital status, and so on.
- 3) There are some confusing expressions in this paper. For instance, "it was found that the menstrual cycle of 27 patients (nasty 27) returned to normal, and 6 patients (18%) who intended to become pregnant became pregnant within 1 year after surgery." I wonder if the 6 patients are included in the 27 patients or not?

Reply: Thank you for your precious time reviewing our manuscript, we have modified the context according to the suggestions:

1) We have rephrased the statement as "the efficacy of laparoscopic sleeve gastrectomy (LSG) for obesity with PCOS are unclear".

2) We have added the baseline information of the patients in Table 1 in the revised manuscript.

3) Yes, of all the patients, six who intended to become pregnant became pregnant within one year of the procedure, including those who had a return to normal menstrual cycles (27 patients).

Reviewer #2:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: The authors made a retrospective analysis, and used the data to explore the effect of laparoscopic sleeve gastrectomy on

related variables of patients with polycystic ovary syndrome (PCOS). After reasonable selecting the time points for observation before and 1 month, 3 months, 6 months and 12 months after operation, the authors showed that the anthropometric indexes, such as body weight and body mass index of all patients were lower than those before operation. The authors also found that 27 patients returned to normal, and 6 patients who intended to become pregnant became pregnant within 1 year after surgery. In short, the topic of this manuscript is timely and interesting. The authors have organized the manuscript rationally, with good methodology and well-written English. However, some important editing needs to be done before publication: • Although the authors have compared the body mass index of patients before and after the surgery, this study still lacks sufficient comparison to demonstrate the advantages of laparoscopic sleeve gastrectomy. The authors can add more comparison between laparoscopic sleeve gastrectomy and other therapeutic methods in the Introduction part. • All the abbreviation should appear along with the full name at the first time. For example, the “EWL” in the Results part. • The authors should provide the ethical statement in the manuscript.

Reply: Thank you for your precious time reviewing our manuscript, we have modified the context according to the suggestions:

1) We have provided more information on the comparison of laparoscopic sleeve gastrectomy and other therapeutic methods in the Introduction part as “The two most common types of bariatric surgery are laparoscopic sleeve gastrectomy (LSG) and laparoscopic Roux gastric bypass (LRYGB). LRYGB is found to be superior in long-term remission of dyslipidemia and hypertension while LSG is relatively low difficulty, small changes to the original structure of the human body and few postoperative complications. Laparoscopic sleeve gastrectomy has been the most commonly performed bariatric procedure since 2014 and continues to steadily increase in number and percentage of all bariatric procedures year after year.”.

2) We have provided the full name of the abbreviations.

3) The ethic statement has been provided as “The study was reviewed and approved by the Shanxi Bethune Hospital, Shanxi Academy of Medical Sciences Review Board.”.