

The efficacy of endoscopic botulinum toxin injection and semaglutide injection in the treatment of postoperative weight gain in patients undergoing LSG

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Abstract:

Objective: Comparison of the therapeutic effects of endoscopic botulinum toxin injection and semaglutide injection in the treatment of postoperative weight gain in patients undergoing laparoscopic sleeve gastrectomy (LSG).

Method: Retrospective analysis of patients who underwent endoscopic botulinum toxin injection and semaglutide injection for postoperative weight gain in our center over the past 2 years. The injection method of botulinum toxin is to dilute 300U of type A botulinum toxin (BOTOX, Allergan Pharmaceuticals Ireland) with 20ml of physiological saline. Four points are selected for injection at each of the five levels of gastric antrum, gastric body sinus junction, gastric body, gastric fundus junction, and gastric fundus, with 1ml of drug injected at each point. The application method of semaglutide injection (Novo Nordisk Pharma AG) is to start at 0.5mg once a week and increase by 0.25mg every 4 weeks until the patient can tolerate the maximum dose, with a maximum dose of $\leq 1\text{mg}$ qw, for a total of 6 months. Follow up time points are 2 and 6 months after treatment.

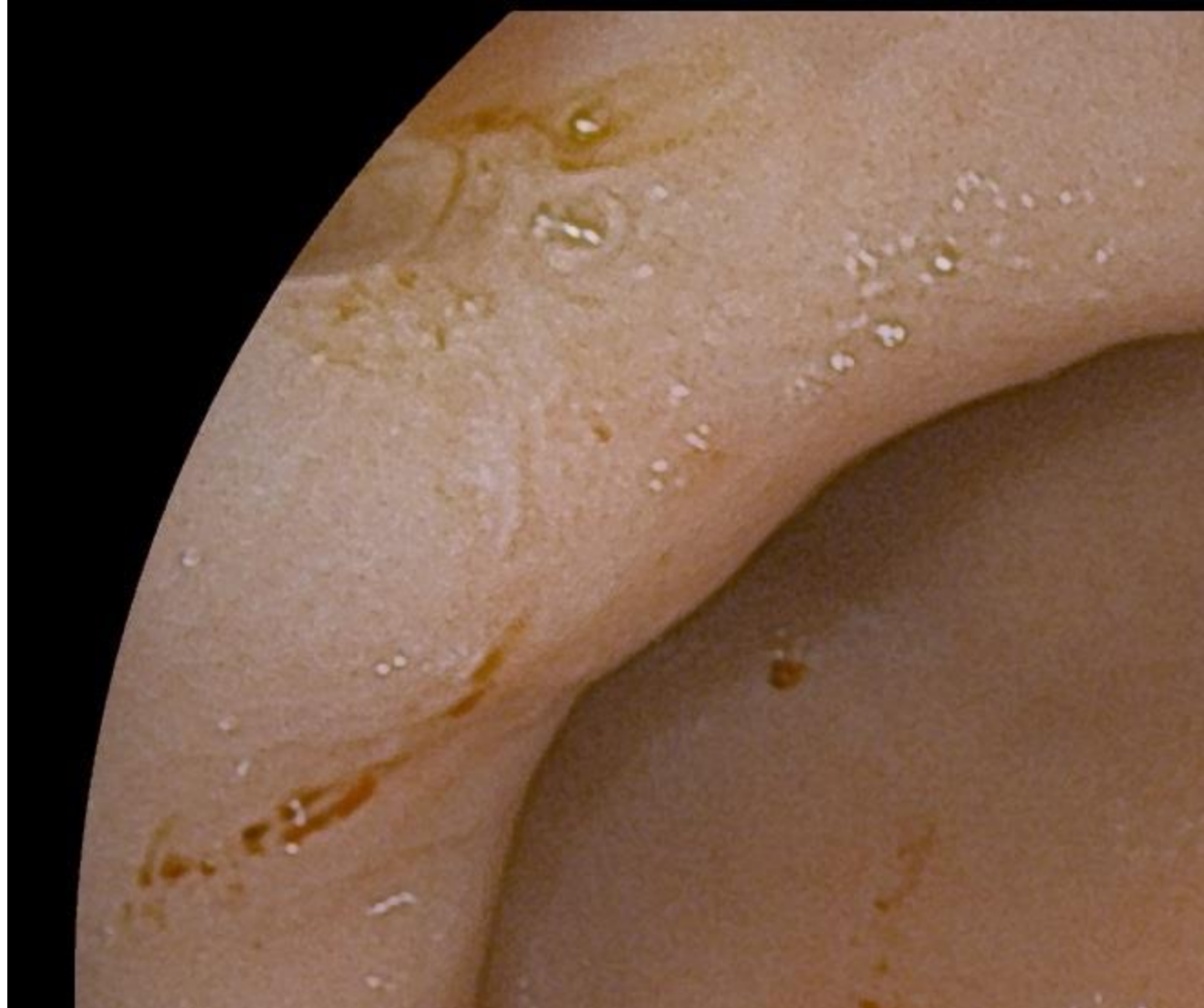
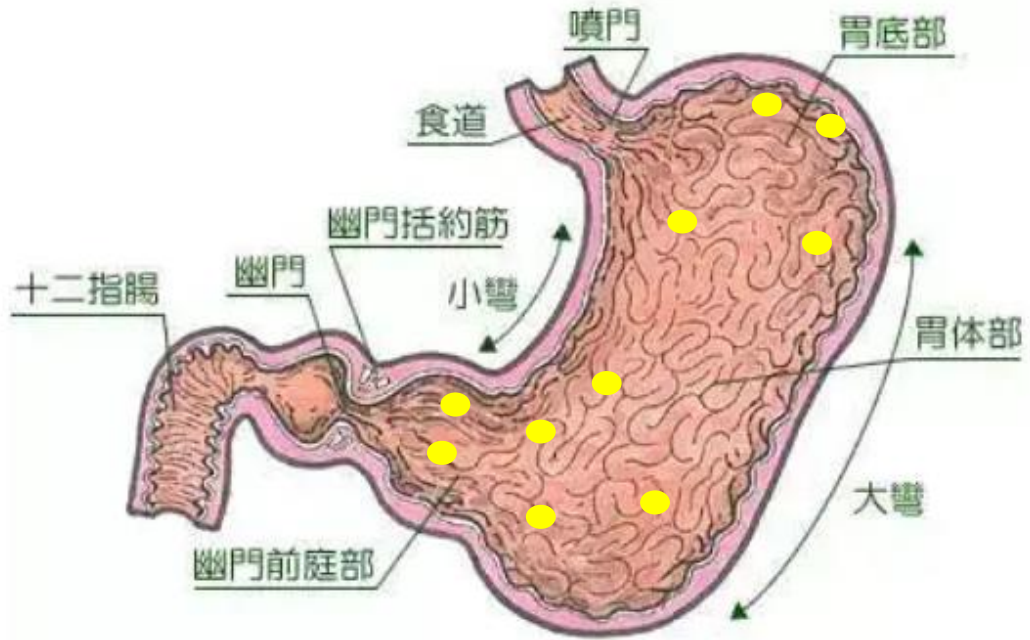
Results:

22 people in the group treated with botulinum toxin after LSG surgery (LSG+BTX group) completed follow-up, while 13 people in the group treated with semaglutide after LSG surgery (LSG+Se group) completed follow-up, respectively. The postoperative total weight loss (TWL) of LSG+BTX group, LSG+Se group at 2 months were 6.01%, and 5.46%. There was no statistical difference between the groups ($P > 0.05$). The postoperative TWL of LSG+BTX group, LSG+Se group at 6 months were 5.62%, and 8.89% respectively. There was no statistical difference between the groups ($P > 0.05$). The average time for endoscopic injection is 8 minutes, and there were no complications (such as intraoperative bleeding, perforation, etc.) during the treatment process.

Table 2.Changes at 2 month, 6month, between LSG+BTX and LSG+SME group.

	LSG+BTX (n=22)	LSG+SME (n=13)	P-value
TWL% (2m) (Mean±SD)	6.01 ± 3.95	5.46 ± 4.36	0.703
TWL% (6m) (Mean±SD)	5.62 ± 4.14	8.89 ± 6.15	0.069
EWL%(2m) (Mean±SD)	26.65 ± 13.12	19.52 ± 23.52	0.256
EWL%(6m) (Mean±SD)	24.46 ± 14.89	41.10 ± 30.56	0.085

Conclusion: Endoscopic botulinum toxin injection can be a safe and effective treatment for postoperative weight gain in LSG. During the 2-month follow-up period, the efficacy of botulinum toxin was similar to that of semaglutide. During the 6-month follow-up period, the efficacy of botulinum toxin was similar to that of semaglutide.



Thanks for your attention

