

EUS Guided Gastroenterostomy Vs Surgical Gastrojejunostomy for the Palliation of Malignant Gastric Outlet Obstruction: A Systemic Review and Meta-analysis

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Background: Gastric Outlet Obstruction (GOO) was traditionally treated palliatively with surgical gastrojejunostomy (SGJ). However, very few studies were done on less aggressive procedures including EUS guided gastroenterostomy (EUS-GE).

Methods: We performed a comprehensive search in the databases of PubMed/MEDLINE, Embase, and the Cochrane Central Register of Controlled Trials from inception through October 10, 2021. We considered only randomized controlled trials. The primary outcome was the technical success. The secondary outcomes were the occurrence of adverse events and the 30 days mortality rate. The random-effects model was used to calculate the risk ratios (RR), mean differences (MD), and confidence intervals (CI). A p value <0.05 was considered statistically significant.

Results: Four randomized controlled trials involving 271 patients were included in the meta-analysis. The rate of the technical success was significantly lower in the EUS-GE compared to the SGJ (91.4% vs. 100%, RR 0.92, 95% CI 0.87 – 0.98, p =0.001, I² = 0%). However, no statistical significance was noted in the rate of adverse events and the 30 days mortality rate between the two groups (11.7% vs 10.4%, RR 0.90, 95% CI 0.20 – 4.10, p =0.89, I² = 59%) and (4.6% vs. 1.4%, RR 1.61, 95% CI 0.31 – 8.31, p =0.57, I² = 0%).

Conclusion: Our meta-analysis demonstrated that the technical success was significantly higher in the SGJ compared to the EUS-GE. However, there was no significant difference between the two groups in the rates of clinical success, 30 days mortality rate and the rate of adverse events.