

# EUS-Guided Gastroenterostomy in the Treatment of Gastric Outlet Obstruction

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Gastric outlet obstruction is a condition that results from benign or malignant mechanical obstruction of the gastric outflow tract involving gastric, duodenal or extraluminal pathology. Mainstay of treatment in gastric outlet obstruction currently involves enteral stent placement or gastrojejunostomy. EUS-guided gastroenterostomy is a novel technique that is emerging to be a promising non-surgical alternative for patients with gastric outlet obstruction.

Most common causes of benign obstruction are peptic ulcer disease. Most common causes of malignant obstruction are gastric, duodenal and pancreatic cancer [1]. Patients with gastric outlet obstruction often have poor prognosis considering the underlying etiology may be malignant obstruction. Symptoms of gastric outlet obstruction include nausea, vomiting and abdominal pain. Patients are often unable to maintain adequate oral intake due to persistent nausea and vomiting. In patients with poor prognosis, treatment is done with a palliative intent to improve the quality of life.

Main treatment modalities in malignant gastric outlet obstruction are- surgical gastrojejunostomy and enteral stent placement. Surgical gastrojejunostomy has a high technical success rate of 95% to 100% but it has a significantly high morbidity rate of 24% [1]. Enteral stent placement also has a high technical success rate but there is a risk of stent migration and dysfunction with food impaction, tissue overgrowth [1].

In order to provide a safer and non-surgical treatment option, EUS guided gastroenterostomy is now taking the center stage in management of gastric outlet obstruction. While this technique can be used in both benign and malignant obstructions, multiple studies have reported about its safety and efficacy in malignant obstructions. These studies have reported the technical and clinical success of EUS-guided gastroenterostomy in treating malignant gastric outlet obstructions to be 80%-100% and 73%-

95% respectively [1-4]. A meta-analysis in 2020 evaluated the use of EUS-guided gastroenterostomy in management of gastric outlet obstruction [5]. Meta-analysis included 12 studies with a total of 285 patients. Technical success and clinical success were reported at 92% and 95% respectively. Recurrence of symptoms was reported in 9% and adverse events were reported in 12% of the patients. This meta-analysis concluded based on the above-mentioned results that EUS-guided gastroenterostomy is a safe and effective treatment option. Further prospective studies will be helpful in solidifying this novel technique and its use in the management of gastric outlet obstruction.

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