



Surgical Experience in Gastric Outlet Obstruction in Eastern India– A Retrospective Analysis

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KEYWORDS

Corrosive, GOO, Gastro-jejunostomy, Malignancy, UGI Endoscopy, PUD

ABSTRACT

Background: Gastric outlet obstruction (GOO), occurs due to obstruction at pylorus. it is not a single entity but it is the clinical and pathophysiological consequence of many disease processes that leads to a mechanical impediment to gastric emptying.

Methods: Total patients 178 patients attending the Department of General Surgery IIMSR Haldia from April 2016 to March 2019 with chief complaints of projectile vomiting, visible gastric peristalsis, or palpable distended stomach, diagnosed as GOO from UGI endoscopy and barium meal study were included in this study. Cases of the functional non-mechanical causes of GOO were excluded, along with the paediatric age group. Only patients of 12 years and above were included in this study.

Results: Out of 178 cases of GOO, 92 cases had neoplastic etiology (carcinoma stomach- 63, carcinoma gall bladder-20, periampullary-7, carcinoma colon-2), 48 patients to PUD, 22 had a pseudocyst of the pancreas, 6 had post-surgical stricture due to duodenal perforation repair in the past, 5 had tubercular and corrosive etiology each. 71 cases (39.3%) cases were labourers. The most common age group for presentation was 61-70 years, with 52 cases (29.21 %). Feeding jejunostomy (FJ) was the most common surgical procedure, with 88 cases (49.4%), as most patients were malnourished and nutrition was improved for definitive surgery. Morbidity in this study was 36 cases (18.1 %) with mortality of 2 cases (1.1%)

Conclusion: GOO due to neoplastic etiology followed by PUD is common in eastern India; multimodal treatment in a staged manner for GOO patients has good clinical outcomes and few complications.

INTRODUCTION

Gastric outlet obstruction (GOO) is a syndrome of clinical importance that manifests with a constellation of symptoms, including postprandial vomiting, early satiety, abdominal pain, and loss of weight. Usually,

either a benign or malignant disease causing a mechanical obstruction or a delayed gastric emptying due to motility disorder is responsible for the above disease. The mechanical obstruction is at the level of the pyloric channel, pyloric antrum, or duodenum and can



be mural intramural or extramural. [1][2]The etiology of gastric outlet obstruction can be broadly divided into two categories: Mechanical obstruction (from either benign or malignant causes) and motility disorders. Mechanical obstruction due to Benign causes include Peptic ulcer disease, Helicobacter pylori (H. pylori) related inflammation, Polyps, Gastric tuberculosis, Gastric volvulus, Annular pancreas, Pancreatitis - Acute and chronic, Non-steroidal anti-inflammatory drug (NSAID) use, Ingestion of corrosive substances, Anastomotic strictures, Crohn disease, Gastric bezoars, Bouveret syndrome (impaction of gall stones in the pylorus or proximal duodenum)Eosinophilic gastroenteritis.[1][2][3]Malignant mechanism GOO can occur with neoplastic growth in the antropyloric zone, pylorobulbar area, and the proximal duodenum. The most common neoplastic condition causing GOO is carcinoma of the distal stomach. It comprises 35 % of total malignant GOO; the adenocarcinoma of the pancreas with duodenal or gastric extension is the second leading cause, accounting for 15% to 25% of the total cases. Other causes are neoplasm of proximal duodenum and ampulla, metastatic or primary duodenal malignancy, gastric lymphoma, locally advanced gallbladder carcinoma or cholangiocarcinoma, and gastric carcinoids [4]

Gastroparesis is the most common cause of benign GOO. Gastroparesis can occur due to diabetes mellitus, viral illness, and iatrogenic damage to the vagus nerve, medications (e.g., opiates, anticholinergic), paraneoplastic syndromes, or any solid neoplasm infiltrating the vagus. Some other infiltrative diseases, like amyloidosis and carcinomatosis, can also cause gastroparesis.[4][5][6][7]

OBJECTIVES

In this article, we present our experience of managing patients with GOO at our tertiary-level hospital in HALDIA. We aim to identify.

1. The changes in etiology and presentation of GOO.
2. To evaluate diagnostic methods and management strategies of GOO in adults
3. To study the socio-demographic variables of patients who present to us with GOO

MATERIALS AND METHODOLOGY

For this retrospective study, we included all patients with clinical features of gastric outlet obstruction due to various aetiologies who were surgically treated in the

Department of Surgery, Haldia, from April 2016 to March 2023. We extracted information about the patients who underwent surgery for gastric outlet obstruction once the approval of the institutional ethics committee was obtained. From our medical record registry, we extracted patient-related information on demographic data, the intent of Ingestion of corrosive acid, immediate and late management the patient received, indications of the surgery, details of surgical procedure done, and complications faced by the patient, pre-and post-operative weight and other nutritional status parameters, including follow up visits. Collected data was compiled and entered into Microsoft Excel sheets. Using graph pad.com statistical software, we analyzed the data for descriptive statistics using appropriate statistical techniques. Patients with corrosive Ingestion with dysphagia and odynophagia for 8-10 days were treated with initial feeding jejunostomy to maintain nutrition, and definitive treatment was planned six months after the final UGI endoscopy and barium meal study reports.

INCLUSION CRITERIA

Clinical Features

History-----projectile vomiting

Inspection-- visible gastric peristalsis [VGP]

Palpation----presence of a palpably distended and hypertrophied stomach

Auscultation--- gastric succussion splash heard

3-4 hours after the last meal

Overnight fasted gastric aspirate more than 200ml.

Saline load test of Goldstein

Upper Gastrointestinal endoscopy demonstration

Radiological demonstration of gastric outlet obstruction.

Demonstration at the operation of gross narrowing of the gastric outlet

EXCLUSION CRITERIA

Age \leq 12 YRS(PAEDIATRIC AGE)

Cases of functional non-mechanical causes of GOO

Patients with the oesophageal stricture is not responding to endoscopic therapy

RESULTS

Out of 178 cases of GOO, 92 cases had neoplastic etiology (carcinoma stomach- 60, carcinoma gall bladder-20, periampullary-7, carcinoma colon-2, Gastric gist-3), 48 patients had goo due to PUD, 22 had pseudocyst of the pancreas, 6 had post-surgical stricture



due to duodenal perforation repair in the past, 5 had tubercular and corrosive etiology each

Table 1 (A) Sex distribution

Sl no	Cause	Total cases	Male (%)	Female (%)	Male: female	Percentage (wrt to 178 cases)
1	Neoplasia	92	62(67.3%)	30(32.6%)	1.24: 1	51.7
2	Pud	48	39 (81.2%)	9 (18.7%)	14.3 : 1	26.9
3	Pancreatic Pseudocyst	22	16(72.7%)	6(27.2%)	2.6:1	12.4
4	Tubercular	5	3 (60%)	2(40%)	3:2	2.8
5	Corrosive	5	1 (20%)	4 (80%)	1: 4	2.8
	Post-Surgical Stricture	6	5 (83%)	1 (16%)	5:1	3.3
		178	115 (64.6%)	63(35.3%)	1.8 : 1	100

Table 1 (B) Sex distribution

Sl no	Cause	Total cases	Male (%)	Female (%)	Male: female	Percentage	
						Wrt to neoplastic cases (92)	Wrt total cases (178)
1	Carcinoma stomach	60	42 (70%)	18 (30%)	2.3:1	65.2	33.7
2	Carcinoma gall bladder	20	12(60%)	8(40%)	1.5:1	21.7	11.2
3	Peri-ampullary carcinoma	7	4(57.1%)	3(42.8%)	1.3:1	7.6	3.9
4	Carcinoma colon	2	2 (100%)	0	1:0	2.1	1.1
5	Gastric GIST	3	3 (100%)	0		3.2	1.6
	Total cases	92	63 (68.5%)	29(31.52%)	2.1:1	100	51.7

Table 2 Occupation distribution

Occupation	Number	Percentage
Labours	71	39.3
Farmers	47	26.4
Students	33	18.5
Businessman	17	9.5
house wife	10	5.6

Table 3 Age group distribution

Age in years	Number	Percentage
11-20	10	5.61
21-30	15	8.42
31-40	18	10.11
41-50	22	17.6
51-60	51	12.35
61-70	52	29.21
71-80	10	5.61
>80	0	0
Total	178	100



Table 4 Average age distribution

Sl no	Disease	Average age in years
1	Corrosive	31.2
3	Neoplasm	63.6
4	PUD	41.3
5	Pancreatic pseudo cyst	30.4
6	Tuberculosis of stomach	33.3
7	Post-surgical stricture	44.1

Table 5 Alcohol and tobacco consumption distribution

Sl number	Tobacco consumption		Alcohol consumption	
	No of cases	Percentage	No of cases	Percentage
Farmers	57	32	45	25.2
Labourers	39	21.9	59	33.1
Students	7	3.9	4	2.24
Businessman	28	15.7	40	22.4
Total	131	100	148	100

Table 6 Blood group distribution

Aetiology	Blood group O	Blood group A	Blood group B	Blood group AB
Neoplasia	10	39	9	34
Pud	10	33	5	0
Pancreatic pseudocyst	11	5	6	0
Tubercular	1	1	0	3
Corrosive	1	2	0	2
Post-surgical stricture	2	1	3	0
TOATAL	35	81	23	39

Table 7 Symptoms distribution

ETIOLOGY	TOTAL CASES	PAIN		VOMITING		ANOREXIA		WT LOSS		UGI BLEED		MALENA		FULLNESS	
		TOTAL CASES	%	TOTAL CASES	%	TOTAL CASES	%	TOTAL CASES	%	TOTAL CASES	%	TOTAL CASES	%		
Neoplasia	92	27	23.9	85	89.1	78	84.7	78	84.7	4	4.3	4	4.3	90	97.8
Pud	48	6	12.5	24	50	20	41.6	20	41.6	11	22.9	6	12.5	20	41.6
Pancreatic pseudocyst	22	22	100	11	50	6	27.2	6	27.2	4	18.1	2	9	7	31.8
tubercular	5	3	60	4	80	3	60	5	100	1	20	1	20	3	60



Corrosive	5	5	100	5	100	5	100	5	100	1	20	1	20	2	40
Post-surgical stricture	6	3	50	5	83.3	3	50	3	50	0	0	0	0	5	83.3
	178	66	37	134	75.2	115	64.6	117	65.7	21	11.7	14	7.8	127	71.3

Table 8 Signs distribution

	Total Cases	Pallor		dehydration		Pedal oedema		VGB		Succussion splash		Mass		Tenderness	
		Cases	%	cases	%	cases	%	Cases	%	cases	%	cases	%	cases	%
Neoplasia	92	88	95.65	29	31.5	53	57.6	25	27.1	10	10.8	36	39.1	7	7.6
Pud	48	24	50	21	43.7	11	22.9	6	12.5	35	72.9	4	8.3	3	6.2
Pancreatic Pseudo cyst	22	3	13.6	10	45.4	3	13.6	3	13.6	3	13.6	18	81.8	16	72.7
Tubercular	5	3	60	3	60	2	40	2	40	2	40	0	0	0	0
Corrosive	5	3	60	4	80	3	60	1	20	1	20	0	0	5	100
Post-Surgical Stricture	6	2	33.3	2	33.3	1	16.6	1	16.6	5	83.3	0	0	0	0
		123	69.1	69	38.7	71	39.8	38	37	56	31.4	58	32.5	31	17.4

Table 9 Pre-operative albumin, haemoglobin & BMI distribution

Sl number	Aetiology	Pre op average albumin	Pre op average haemoglobin	Pre op average BMI
1	Neoplasia	2.6	8.5	18.1
2	Pud	2.7	9	16.5
3	Pancreatic Pseudo cyst	3.3	10.2	19.4
4	Tubercular	3.1	10.8	18.3
5	Corrosive	3	11	17.8
6	Post-Surgical Stricture	3.1	10.6	18.9

Table 9A CT Scan findings of GOO cases

Sl number	Aetiology	Radiological findings	Cases	percentage
1	Neoplasia	• Irregular polypoidal mass of antrum causing luminal narrowing	60	33.7
		• Mass of gall bladder infiltrating in duodenum	20	11.2
		• Peri-ampullary mass causing luminal narrowing in 2nd part of duodenum	7	3.9
		• Transverse colon mass infiltrating the 2nd part of duodenum	2	1.1
		• Heterogenic mass obstructing gastric antrum	3	1.6
		Total	92	51.7



2	Pud	changes of wall thickening and luminal narrowing in outlet obstruction	48	26.9
3	Pancreatic Pseudo cyst	Cystic mass compressing 2nd and 3rd part of duodenum	22	12.4
4	Tubercular	Gastric-duodenal wall thickening, luminal narrowing, and local lymphadenopathy, causing extrinsic compression	5	2.8
5	Corrosive	Short stricture involving antrum	5	2.8
6	Post-Surgical Stricture	Stricture at duodenum 1 st part	6	3.3

Table 10 Surgical Intervention

Sl no	Over all Type of surgery	Cases	Percentage
1	Feeding jejunostomy	88	49.4
2	Radical D2 gastrectomy	53	29.7
3	TV+GJ	48	26.9
4	Cystogastrostomy	16	8.9
5	Roux en y cystojejunostomy	8	4.4
6	Finney's gastroduodenostomy	6	3.3
7	Retro colic GJ	5	2.8
8	Whipple	5	2.8
9	Endoscopic dilatation	3	1.6
10	Palliative Triple by pass	2	1.1
11	Extended right hemicolectomy	2	1.1
12	Distal gastrectomy with BII	3	1.6

53 cases of gastric carcinoma had FJ underwent Radical d2 gastrectomy, 4 cases lost to follow up, 3 cases left on fj due to progressive disease even after neoadjuvant chemotherapy, and were given palliative chemotherapy with best supportive treatment. 20 patients of carcinoma gall bladder and 2 patients of ca colon had fj. Patients with carcinoma gall bladder were given palliative chemotherapy; neoadjuvant chemotherapy was given to carcinoma colon followed by extended right hemicolectomy and adjuvant chemotherapy. 7 patients of ca periampullary had FJ, 5 patients underwent Whipple's surgery for periampullary and 2 pts underwent triple bypass for advance disease after nutritional improvement. 48 patients of PUD had TV GJ,

16pts. underwent Cystogastrostomy and 8 patients had Roux en Y Cystogastrostomy for pseudo cyst of pancreas. Out of 5 patients with gastric tuberculosis 2 responded to ATT and 3 patients needed further endoscopic balloon dilatation. Retro colic gastrojejunostomy was done in all corrosive cases, whereas Post-surgical stricture, Finney's gastroduodenostomy was done.

Post-operative oral feeds were started in the form of clear fluids from POD1. The morbidity seen in this series was 34.2 % and one patient died on POD 10 due to PJ leak and sepsis, whereas 1 patient died due to GJ leak and sepsis as she was having advanced periampullary carcinoma

Table 11 Post-operative complications

Sl number	Post-operative complication	No of cases	percentage
1	Post-operative fever	10	5.6
2	Surgical site infection	7	3.9
3	PONV	35	19.6
4	DGE	3	1.6



5	Pulmonary complication	4	2.2
6	Anastomotic leak	2	1.1

Chemotherapy was given as per ESMO guidelines as perioperative and palliative treatment

Table 12 Follow up distribution

FOLLOW UP		1 ST MONTH	3 RD MONTH	6 TH MONTH	REMARKS
Neoplasia	92	88	88	60	6 patients had gastritis, medical management Was done
Pud	48	48	48	40	All Underwent successful chemotherapy
Pancreatic pseudocyst	22	22	22	18	All were symptom free
Tubercular	5	5	5	5	2 patients continued to have recurrent pain Abdomen
Corrosive	5	5	5	5	
Post-surgical stricture	6	6	6	6	

Table 13 Average weight gain after 2 months of surgery

Aetiology	Average weight gain (2 months after the surgery)
Corrosive	3.1 kgs
Carcinoma	2.7 kgs
PUD	4.2 kgs
Pancreatic pseudo cyst	4.9 kgs

DISCUSSIONS

The discussion is mainly on observations made from etiology, presenting symptoms, signs, investigations, surgeries performed, and follow-up of 178 cases of GOO who attended the general surgery Department, IIMSR Haldia for a period of 6 years. The commonest cause of GOO was neoplastic etiology 92 patients (carcinoma stomach- 60, carcinoma gall bladder-20, periampullary-7, carcinoma colon-2, and gastric gist-3), Peptic ulcer disease 48 patients, pancreatic pseudo cyst 22 patients,

tubercular 5 patients, Corrosive 5 patients, Post-surgical stricture 6 patients.

AETIOLOGY

PUD ulcer was the most common cause of GOO previously, before PPI era. With regards to individual incidences, neoplastic aetiology is most common cause in which carcinoma stomach is the most cause of GOO in various studies after the PPI era, which was similar to our study.

Table 16 Etiological comparisons between other studies

Study name	year	Most common cause of GOO	Percentage
Godadevi TSRSV, Reddy RA et al. ⁽⁸⁾	2016	Ca stomach > PUD	52% > 46%
Kumar PN, Lakshmi RM. et al. ⁽⁹⁾	2017	Ca stomach > CDU	51% > 36%
Clement SH, Cherukumalli RP et al. ⁽¹⁰⁾	2017	PUD > Ca stomach	52% > 25 %
Tejas AP, Jade R et al. ⁽¹¹⁾	2018	Ca stomach = PUD	41.5%
PRESENT STUDY	2023	Ca stomach > PUD	51.7% > 26.9%



AGE

In this study, the mean age for malignancy of the stomach is 53.6yrs and for benign cause, being 34.3 yrs. In malignancy stomach with GOO, the youngest age of

presentation is 22 years (GIST), and the oldest is 68 years. The majority of malignant cases were in the age group 50-60 years; however, the majority of cases were due to corrosive gastric strictures being 31-40 years.

Table17 Age comparisons between other studies

Study	year	Average age of GOO	Most common cause with average age of presentation
Godadevi TSRSV, Reddy RA et al ⁽⁸⁾	2016	6 th - 7 th decade	Ca stomach > PUD (54.3 yrs) (47.7 yrs)
Kumar PN, Lakshmi RM. Et al ⁽⁹⁾	2017	5 th decade	Ca stomach > CDU (57.4 yrs) (47.5 yrs)
Clement SH, Cherukumalli RP et al. ⁽¹⁰⁾	2017	5 th - 6 th decade	PUD > Ca stomach (53 yrs) (42.5 yrs)
Tejas AP, Jade R et al. ⁽¹¹⁾	2018	3 rd -4 th decade	Ca stomach = PUD
PRESENT STUDY	2023	6 th - 8 th decade	Neoplastic > PUD (31.2) (53.6)

SEX

Out of 178 cases studied, 115 (64.6%) cases were male (M) and 63(35.3%) were female(F) with an M:F ratio of 1.8:1. With regards to individual aetiologies the male to female ratio (M: F) in case of neoplastic GOO was 1.24: 1. The M: F ratio of gastric carcinoma was 2.3:1 Most of the sub-continental studies have shown that men has outnumbered women as a whole, from a ratio (M: F) varying from 2.7: 1(9), 3.5:1(10), 5:2(8) and 5.5:1(12) as aetiologies. The almost equal ratio of the GOO seen in our series and increasing PUD cases in females can be explained by the increasing working culture in females and increasingly stressful life, including home violence, leading to more cases of corrosive Ingestion.

OCCUPATION

Most commonly, GOO was seen in the labourers belonging to low socio-economic status due to irregular dietary habits, which contributed to the disease process, followed by farmers; this observation was quite similar to other Indian studies (6-9).

SYMPTOMS

Similar to other Indian studies, vomiting was the most common symptom (75.2%), which was usually spontaneous and projectile-type containing partially digested food particles. Gastric fullness has been the second predominant symptom in our study, but it was less commonly observed in other studies than in most cases. In patients with GOO, due to malignant causes, the duration of abdominal pain varied from 2 months to 7 months. 10 of 60 gastric carcinoma patients having GOO gave prior history suggestive of acid peptic disease, suggesting malignancy developing in gastric ulcer. Abdominal pain was mainly present in the upper abdomen. Duration of abdominal pain in chronic duodenal ulcers varied from two months to five years. Those patients with a long history gave past history suggestive of PUD. 6 cases were previously operated for duodenal perforation. 43 of 48 cases gave a positive history of previous acid peptic disease with irregular proton pump inhibitors use.

Table18 Symptoms comparisons between other studies

Symptoms	Godadevi et al ⁽⁸⁾	Kumar PN et al ⁽⁹⁾	Clement SH et al. ⁽¹⁰⁾	M.S. Sushruta et al. ⁽¹³⁾	Present study
	%	%	%	%	%
Pain	96	89	96.6	92.5	37



Vomiting	-	100	100	100	75.2
Anorexia	84	56	80	77.05	64.6
Weight loss	72	60	73.3	54.15	65.7
Ugi bleed	24	29	30	-	11.7
Malena	64	22	50	-	7.8
Fullness	68	-	-	-	71.3

Table 19 Signs comparisons between other studies

Signs	Kumar PN et al (9)	Clement SH et al.(10)	Tejas AP et al (11)	M.S. Sushruta et al(13)	Present study
	(%)	(%)	(%)	(%)	(%)
pallor	53	90	65.9	77.9	69.1
dehydration	54	70	-	94.07	38.7
Pedal edema	-	-	-	-	39.8
VGB	63	96.6	75.6	52.25	37
Succussion splash	36	80	70.7	41.8	31.4
Mass	25	36.6	36.6	28.1	32.5
tenderness	-	-	-	-	17.4

In agreement with other studies, the diagnosis of GOO was based on the clinical features of the patient, endoscopic diagnostic intervention, and radiological help. The findings were confirmed intraoperative and with histopathological diagnosis.

BLOOD GROUP

Most commonly patients were having blood group O followed A, in cases of GOO due to malignancy of stomach and PUD blood group distribution was similar to other studies ,however in the present study GOO due to corrosive gastric stricture had blood group O > B.

Table20 Blood group comparisons between other studies

Study	M/C blood group over all (%)	M/C blood group PUD	M/C blood group Ca Stomach	M/C blood group Corrosive/ others
Godadevi et al (8)		O > A (52%) > (26.08%)	A > other blood groups (50%)	-
Tejas AP et al (11)	O > A (56.1% > 24.4%)	O > A (76.5%) > (23.5%)	O > A (47.1%) > (35.3%)	-
M.S. Sushruta et al(13)	O > A (42%) > (30%)	O > A (77.7%) > (11.1%)	A > O (40.6%) > (21.8%)	-
Present study	A> AB (45.5%) >(21.9%)	A > O (21.9%) > (5.6%)	A > AB (21.9%) > (19.1%)	AB =A (1.1%) > (1.1%)

SURGERY

The most common type of surgery in the present study was feeding jejunostomy (FJ) to improve the nutritional status before definitive surgical treatment in neoplastic GOO cases; however, advanced cases of gall bladder carcinoma had FJ.



Table 21 Preoperative procedure comparisons between other studies

Operative procedure	Kumar PN et al ⁽⁹⁾	Clement SH et al. ⁽¹⁰⁾	Tejas AP et al ⁽¹¹⁾	M.S. Sushruta et al ⁽¹³⁾	Present study
Retrocolic GJ	25 (palliative)		4.8 (palliative)		2.8
D2 gastrectomy + B II	23	16.6	12.1	36	29.7
TV+GJ	34	70	39.0	36	26.9
Cystogastrostomy					8.9
Antrectomy			2.4		-
Total gastrectomy	2				-
GJ+ HJ	10 (palliative)				1.1
Distal gastrectomy + B II			24.3		1.6
Antecolic GJ (Palliative)		13.33		16	-

MORBIDITY

The morbidity seen in this series was 34.2%, and one patient died on POD 10 due to PJ leak and sepsis, whereas 1 patient died due to GJ leak and sepsis on POD 3 as she had advanced peri-ampullary carcinoma.

Table 22 Morbidity comparisons between other studies

Morbidity	Kumar PN et al ⁽⁹⁾	Clement SH et al. ⁽¹⁰⁾	Tejas AP et al ⁽¹¹⁾	M.S. Sushruta et al ⁽¹³⁾	Present study
	(%)	(%)	(%)	(%)	(%)
Post-operative fever			8		5.6
Surgical site infection	6	4		12	3.9
PONV					19.6
DGE					1.6
Pulmonary complication		3	6	6	2.2
Anastomotic leak					1.1
Bile leak	1			1	-

MORTALITY

Table 23 Mortality comparisons between other studies

Sl no	Study	Mortality	
		Cases	percentage
1	Kumar PN et al ⁽⁹⁾	3	5.45
2	Clement SH et al. ⁽¹⁰⁾	1	2.5
3	Tejas AP et al ⁽¹¹⁾	1	2.4



4	M.S. Sushruta et al ⁽¹³⁾	3	6
5	Present study	1	1.1

CONCLUSION

Gastric outlet obstruction is the most common disease in the surgical world. With the advent of new diagnostic modality the endoscopy and radiology are helpful in diagnosis the patients at early stages of disease. It is more common among males with malignancy being more common cause in elderly age group and benign gastric outlet obstruction due to peptic ulcer disease more common in young age groups. The patients in eastern India present late with worsen general condition. Feeding-jejunostomy is the most common surgical procedure performed. The result of this study suggests that early recognition of the diagnosis is important because it gives a chance for early resuscitation and definitive surgical management.

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