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A Study of GIT Outlet Obstruction Due To Drug Addiction at Tertiary Care Hospital in Western Rajasthan

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Abstract

Background: Gastric outlet obstruction (GOO) represents a clinical and pathophysiological consequence of any disease process which produces mechanical impediment to gastric emptying. Intrinsic or extrinsic obstruction of the pyloric channel or duodenum is the usual pathophysiology of GOO and the mechanism of obstruction depends upon the underlying etiology.

Methods: Hospital based prospective study conducted at Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner. Patients presenting with gastric outlet obstruction who are drug addicted to NSAIDS, Tramadol, Opium were included.

Results: In present study most common cause of upper GI obstruction was tramadol(46.00%), NSAIDS(22.00%), doda post(19.00%) and tramadol + NSAIDS(13.00%).22.00% patients treated with conservative management and 78.00% patients were treated with surgical management (gastro jejunostomy).

Conclusion: Most common cause of upper GI obstruction was tramadol followed by NSAIDS.

Keywords: GI obstruction, Doda post, tramadol.

Introduction

Gastric outlet obstruction (GOO) represents a clinical and pathophysiological consequence of any disease process which produces mechanical impediment to gastric emptying. Intrinsic or extrinsic obstruction of the pyloric channel or duodenum is the usual pathophysiology of GOO and the mechanism of obstruction depends upon the underlying etiology. Classification of diseases causing GOO into 2 well-defined groups of benign and malignant facilitates management and treatment. Historically GOO has been considered a disease process synonymous with chronic peptic ulcer disease. However since the advent of proton pump inhibitors, the complications from peptic ulcer disease have drastically decreased with a change in ratio between benign and malignant gastric outlet obstruction.[1] Most patients with GOO present with vomiting as their cardinal symptom and tend to develop dehydration and dyselectrolytemia if untreated. Malnutrition and weight loss are frequent when the

condition approaches chronicity and are most significant in patients with malignant etiologies.

The incidence of GOO has been reported to be less than 5% in patients with peptic ulcer disease (PUD), which was earlier the leading benign cause of the problem. The incidence of GOO in patients with peripancreatic malignancy, the most common malignant etiology, has been reported between 15- 20%. In 1990, as many as 2000 operations for GOO were performed annually.[2]Updated estimates are not available, but the need for surgery is thought to have declined because of advancements in endoscopic methods to treat GOO (such as dilatation and stenting). Even in a developing country like India, malignancy is the commonest cause of gastric outlet obstruction. Misra et al reported that 75% of their patieents with GOO had a malignant cause[3]

Material and Methods

Study design: Hospital based prospective study.

Study duration: 12 months.

Study place: Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner

Study population: Patients presenting with gastric outlet obstruction who are drug addicted to NSAIDS, Tramadol, Opium.

Sample size: 100 patients who fit into the inclusion criteria were included in the study.

Sampling Method: Convenience sampling

Inclusion Criteria: Patients presenting with gastric outlet obstruction who are drug addicted to NSAIDS, Tramadol, Opium.

Exclusion Criteria

- Patients aged 20 years and below.
- Pregnant females
- Patient with a recent history of any abdominal surgeries.

Data Collection: In history, details was note about presenting complaints, duration, history of acid peptic disease, features of metabolic disturbances, occupation and personal history including diet, bowel and bladder habits, smoking, and alcoholism. Through analysis of the findings of physical examination done, which include hydration status, VGP, mass, succession splash, hepatomegaly, and ascites.

Hemoglobin level, bleeding time, clotting time, routine urine examination, chest screening, electrocardiogram, blood grouping, fasting blood sugar (FBS) and postprandial blood sugar, blood urea, serum creatinine, serum electrolytes will be estimate as a part of general workup for surgery. Special investigations such as barium meal, upper gastrointestinal (GI) endoscopy, and ultrasonography (USG) abdomen was done wherever feasible.

Any one of the following criteria can be used to diagnose gastric outlet obstruction. Projective vomiting of undigested food consumed previous day, palpable hypertrophied stomach, VGP, gastric succession splash 3-4 h after the last meal, delayed emptying of stomach on barium meal studies, demonstration at operation of grossly narrowed gastric outlet.

Data Analysis: To collect required information from eligible patients a pre-structured pre-tested Proforma was used. For data analysis Microsoft excel and statistical software SPSS was used and data was analyzed with the help of frequencies, figures, proportions, measures of central tendency, appropriate statistical test.

Results

In present study 35.00% patients were from 41-60 Yrs age group followed by 46.00% patients were from 21-40 Yrs age group and 19.00% patients were more than

60 Yrs. 92.00% patients were male and 8.00% were female.

Table 1: Addiction wise distribution of patients

Addiction	No of patients	Percentage
Tramadol	46	46.00
NSAIDS	22	22.00
Doda post	19	19.00
Tramadol + NSAIDS	13	13.00
Total	100	100.00

In present study most common cause of upper GI obstruction was tramadol(46.00%), NSAIDS(22.00%), doda post(19.00%) and tramadol + NSAIDS(13.00%).

Table 2: Symptoms wise distribution of patients

Symptoms	No of patients	Percentage
Pain abdomen	76	76.00
Nausea	87	87.00
Vomiting	87	87.00
Weight loss	48	48.00
Decreased appetite	27	27.00
Constipation	32	32.00

In present study most common symptoms was nausea & vomiting (87.00%), pain abdomen (76.00%), weight loss(48.00%), constipation (32.00%) and anorexia(27.00%).

Table 3: Sign wise distribution of patients

Sign	No of patients	Percentage
Abdominal distension	93	93.00
Tenderness	76	76.00
Anaemia	54	54.00
Bloating	78	78.00

In present study most common sign was abdominal distension (93.00%), tendreness (76.00%), anaemia (54.00%) and bloating (78.00%).

Table 4: Lab investigation

Lab investigation	No of patients	Percentage
Decreased Hb	54	54.00
Electrolyte imbalance	35	35.00
Increased blood urea	26	26.00
Increased serum creatinine	26	26.00

In present study most common finding was decreased Hb (54.00%) and electrolyte imbalance (35.00%) and increased blood urea & creatinine (26.00%).

Table 5: Radiological investigation

Radiological investigation	No of patients	Percentage
Air fluid level, gastric air bubble in x-ray flate plate abdomen	87	87.00
Stricture at duodenum in endoscopy	78	78.00
Duodenual ulcer in endoscopy	22	22.00

In present study 87.00% patients x-ray flate plate abdomen finding was Air fluid level, gastric air bubble and in upper GI endoscopy 78.00% patients were present with stricture at duodenum and 22.00% patients were present with duodenual ulcer.

Table 6: Management

Management	No of patients	Percentage
Conservative	22	22.00
Surgical management (gastro jejunostomy)	78	78.00

In present study 22.00% patients treated with conservative management and 78.00% patients were treated with surgical management (gastro jejunostomy).

Discussion

Hospital based prospective study conducted at Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner on 100 Patients presenting with gastric outlet obstruction who are drug addicted to NSAIDS, Tramadol, Opium.

In present study 35.00% patients were from 41-60 Yrs age group followed by 46.00% patients were from 21-40 Yrs age group and 19.00% patients were more than 60 Yrs. 92.00% patients were male and 8.00% were female

Tejas AP et al [4] was found that majority of patients were in the age group of <40 years (34.1%), followed by 41-50 years (24.4%). Most commonly affected were males (78%) than females (22%). In this series, 16 patients (39%) were farmers, 10 (25%) patients were manual laborers, 9 (22%) patients were housewives, 3(7%) patient were a tailor/shopkeeper and 3(7%) were drivers. Fisher et al, where the average age was 54 with a span from 20-89 and men out numbered women by 2:1 and as compared to 5.5:1 observed by Yogiram and Chowdhary.[5,6]

This higher incidence in males, worldwide can be explained as because of more consumption of gastric irritants by males compared to females.

In present study most common cause of upper GI obstruction was tramadol(46.00%), NSAIDS(22.00%), doda post(19.00%) and tramadol + NSAIDS(13.00%).

Joshi A et al[7] was found that six cases of opium addicts diagnosed with small intestine strictures were selected after excluding the possible etiology of strictures. Investigations like upper gastrointestinal endoscopy, colonoscopy (in patients with small intestinal obstruction), barium meal follow-through, and histopathology of strictures were done in all patients. Among the six cases, two patients were diagnosed with small intestinal obstruction and four patients with gastric outlet obstruction.

The antagonistic effect of opioids occur via opioid receptors in which the μ receptor participates more in their clinical effects. Opioid receptors in the brain and gastrointestinal tract affect pain regulation. Opioids possibly influence both the inhibitory and excitatory neural system of alimentary muscles. Most opioid effects on gastrointestinal motility and secretion occur via suppression of neural activity. The inhibitory effects of morphine on intestinal peristalsis in guinea pigs has been demonstrated by Trendelenberg in 1917. Later studies have shown that morphine-like medicines reduce the frequency of peristaltic waves and maximal ejection pressure. Inhibition of the acetylcholine and non-adrenergic non-cholinergic (NANC) neurotransmitter release of ENS might be involved in this phenomen.[8-9]

In present study most common symptoms was nausea & vomiting (87.00%), pain abdomen (76.00%), weight loss(48.00%), constipation (32.00%) and anorexia(27.00%). Most common sign was abdominal distension (93.00%), tendreness (76.00%), anaemia(54.00%) and bloating (78.00%).

Tejas AP et al [4] was found that abdominal pain was mainly present in the upper abdomen and in 4 patients there was radiation to the back-suggesting involvement of the pancreas. Duration of abdominal pain in chronic duodenal ulcer varied from two months to five years. Those patients with long history gave past history suggestive of APD. In 37 patients, the duration of pain was less than 1 year, of which 17 were malignant patients.

In a study by Rehman, the commonest symptoms were abdominal pain 54 (100%), abdominal distension 49 (90%), vomiting 42 (78%), absolute constipation 37 (68.5%), dehydration 33 (61%), fever 16 (29.6%), mass right iliac fossa 8 (15%), inguinoscrotal swelling 10 (18%).[10]

In a study by Madziga, abdominal pain 88.7%, vomiting 84.8%, and constipation 78.8% were the main symptoms while tenderness and abdominal masses were common signs.[11]

A prospective study by Haridimos M et al in 150 patients, absence of passage of flatus (90%) and/or feces (80.6%) and abdominal distension (65.3%) were the most common symptoms and physical finding, respectively[12]

In present study most common finding was decreased Hb (54.00%) and electrolyte imbalance (35.00%) and increased blood urea & creatinine (26.00%). 87.00% patients x-ray flate plate abdomen finding was Air fluid level, gastric air bubble and in upper GI endoscopy 78.00% patients were present with stricture at duodenum and 22.00% patients were present with duodenual ulcer.

The observations are comparable to a study conducted by Malik et al. [13] they found that most common finding in x-ray flate plate abdomen finding was Air fluid level, gastric air bubble.

In present study 22.00% patients treated with conservative management and 78.00% patients were treated with surgical management (gastro jejunostomy). Tejas AP et al [4] was found that in corrosive antral stricture Billroth I gastrectomy was done. 2 patients of pancreatic malignancy underwent palliative anterior gastrojejunostomy and 2 patients underwent cystojejunostomy for pseudo- pancreatic cyst.

Conclusion

Most common cause of upper GI obstruction was tramadol followed by NSAIDS.

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