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	DY TO EVALUATE ROLE AND EFFICACY OF DING JEJUNOSTOMY DONE FOR POST D INJURY TO OESOPHAGUS AND STOMACH	KEY WORDS:
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BACKGROUND Feeding jejunostomy is a common surgical procedure by which a tube is surgically inserted in the lumen of proximal jejunum primarily to administer nutrition in patients having history of acid ingestion and who were unable to take orally.

**METHODS** A study was carried out on 100 patients having history of acid ingestion in whom feeding jejunostomy done. Enteral feed was started on second day after surgery and patients were followed up for any complications after the procedure.

ABSTRACT RESULTS Most common age group was 21-30 years. The presenting complaint was dysphagia and mode of ingestion was accidental in majority of the patients. On evaluation, most of them had caustic injury to the oesophagus. On 6 months follow up, patients had an average weight gain of 3.7 kgs.

CONCLUSION Feeding jejunostomy in post acid ingestion patients had significant role in maintaining nutrition status of the patients. It is easy to administer, is cost effective with good patient compliance.

## INTRODUCTION

Corrosive injury of the upper gastrointestinal tract is a worldwide clinical problem. Its long-term effect on the gastrointestinal system maintain its place as an important public health issue. This is due to the ready availability of these caustic agents as items of household use and loose regulatory control on its production. [9,10]

Ingestion of corrosive substances is increasingly reported in developing countries, due to lack of education and prevention. The relationship between symptoms and severity of injury may be vague, and patients should be carefully monitored, since esophageal or gastric perforations can occur at any time during the first 2 weeks after ingestion. Endoscopy is considered a cornerstone in the diagnosis of corrosive ingestions, yet the indication for early endoscopy should be made on a case-by-case basis. Timely and early surgery may be the only hope for patients with severe injuries, and an aggressive attitude should be considered in such patients Main late sequelae include esophageal strictures, often accompanied by undernourishment. The likelihood of a gastric outlet obstruction should always be kept in mind. Endoscopic dilatation is usually successful in achieving a patent esophageal lumen, but in complex strictures several attempts must be carried out. A cut-off value for unsuccessful dilatation treatment may be difficult to define, especially where alternative surgical options are not widely available. Even though mortality and morbidity of esophageal replacement in patients not responding to

dilatation are low in expert hands, corrosive strictures are a complex problem which needs a dedicated multidisciplinary team management for successful outcomes.

## **AIMS AND OBJECTIVES**

- To evaluate the benefits of feeding jejunostomy in patients of post acid injury to oesophagus and stomach.
- To assess the outcome after feeding jejunostomy by assessing the complications, recovery from the primary event, discharge rate and mortality.
- To assess the improvement in nutritional status of patients by anthropometric, biochemical, Immunological and functional means before undergoing any major definitive surgery.

# MATERIALS AND METHODOLOGY

The study was carried out on 100 patients who had history of acid ingestion and in whom feeding jejunostomy and any other surgery were done. All of the patient's records were prospectively collected from a hospital Database.

# SUBJECT SELECTION

# **INCLUSION CRITERIA:**

- 1. All patients having history of acid ingestion, either accidental or suicidal.
- 2. All patients of both Male and Female genders with history of acid ingestion.
- 3. All the patients having post-acid injury to either www.worldwidejournals.com

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SYMPTOMS

oesophagus or stomach or both.

- 4. All patients undergoing elective as well as emergency feeding jejunostomy.
- 5. Hemodynamically stable patients.
- 6. Patients more than or equal to 14 years of age

#### **EXCLUSION CRITERIA:**

- 1. Hemodynamically unstable patients
- 2. Patients undergoing Feeding jejunostomy for indications other than post acid injury to oesophagus and stomach.
- 3. Children below the age of 14 years.
- 4. Patients who **do not consent** for any interventions if required.

### RESULTS

In the present study, 100 cases (N = 100) of Feeding Jejunostomy done for post acid injury to oesophagus and stomach were studied in B.J. Medical College and Civil Hospital, Ahmedabad. The results have been analyzed and discussed below.

### STATISTICAL ANALYSIS



In my study, the most common age group affected was between **21 to 30 years (38%)**. The minimum age of patient included in the study is **15 years** and the maximum age is **70 years**. The mean age of all patients in the study group is **32 years** 



- In my study, the mode of acid ingestion was Accidental in 58% patients and Suicidal in 42% of patients.
- In a study by Jalal et al. (2014) reported the results of a retrospective series of 1360 cases of ingestion of household corrosive hydrochloric acid products in Morocco. Ingestions were with suicidal intent in 45% of cases and were accidental in 54%. [13]



- In my study, all 100 patients had history of acid ingestion, minimum 1 month and maximum 2 years from the date of admission.
- The average amount of acid ingested was 25-30 ml. Higher amount of acid was ingested in suicidal cases in compare to accidental cases.
- The most common symptoms during presentation were Dysphagia (99%) and Vomiting (51%). Along with these, patients also had complaints of Abdominal pain (22%) and other symptoms (2%) like Post-prandial epigastric discomfort and Throat pain. No patients had complaint of difficulty in breathing
- Out of all patients presented with complain of Dysphagia, 86 % patients were presented with c/o Dysphagia to both solid and liquid while 13 % patients were presented with c/o Dysphagia to solid only. No patients had complaint of dysphagia to liquid only.
- Duration of symptoms was minimum 7 days and maximum 6 months from the time of presentation.
- In a study by **Dr. Bhaskar Das et al.**, Esophagus was damaged in all patients. Majority of the patients suffered from dysphagia of varying degree at least in some stage of the clinical course. Predominant symptoms were **Dysphagia** in 95 patients (84.8%) and **vomiting** in 32 patients (28.57%).[21]
- In a study by Jalal et al. (2014), Gastroesophageal symptoms occurred in 96% of cases. [13],



- In my study, 82 (82%) patients were diagnosed to have isolated Oesophageal stricture. 11 (11%) patient also had pyloric stenosis with gastric outlet obstruction along with oesophageal stricture. 5 (5%) patients were having isolated pyloric stenosis with gastric outlet obstruction without oesophageal stricture. 1 (1%) patient had peptic perforation and 1 (1%) patient had Tracheooesophageal fistula (T.O.F.)
- In a study by Dr. Bhaskar Das et al., Stricture of oesophagus of varying severity was noted affecting short or long segments and involving upper, middle and lower third including the gastroesophageal junction in total 95 patients (84.8%) and Gastric outlet obstruction in 32 patients (28.57%).



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the 10 (10%) patients. Isolated Feeding Jejunostomy was done in 91 (91%) patients. In 8 (8%) patients, Gastrojejunostomy + Jejunojejunostomy was also done along with feeding jejunostomy. In 1 (1%) patient, Peptic perforation repair along with feeding jejunostomy was done. FJ feeding was started on POD-2 to POD-3. Amount of FJ feeding ranging from 50-200 ml/hr.

### **FOLLOW UP**

- Within 1 month follow-up, 17 patients (17.5 %) had developed some kinds of complains and/or complications related to surgery after discharge. Whereas only 5 patients (5.6 %) of the patients had developed such complains and/or complications within 6 month follow-up. These complains and complications
- were related to feeding jejunostomy surgery and includes Abdominal pain, Peri-FJ discharge, FJ tube blockage, Accidental removal of FJ tube, FJ leak, Peri-FJ leak with excoriation etc.
- The **readmission rate** was **5.15** % (5 patients) at 1 month follow-up and **1.13** % (1 patient) at 6 month follow up.
- Within 1 month follow-up, some kinds of interventions were required in 10 patients (10.31 %), while only 3 patients (3.41 %) were required these interventions within 6 month follow-up. These interventions includes Re-do FJ, Refixation of FJ tube and exchange of FJ tube.

#### SUMMARY AND DISCUSSION

- Most common age group was 21 to 30 years, average age being 32 years.
- Most common presenting symptoms were Dysphagia (99%) and Nausea-Vomiting (51%).
- All 100 patients had history of acid ingestion, minimum 1 month and maximum 2 years from the date of admission.
- The average amount of acid ingested was **25-30 ml**. Higher amount of acid was ingested in suicidal cases in compare to accidental cases.
- The mode of acid ingestion was **Accidental in 58%** patients and **Suicidal in 42%** of patients.
- Duration of symptoms was minimum 7 days and maximum 6 months from the time of presentation.
- 82% patients had isolated Oesophageal stricture. 11% patient had pyloric stenosis with G.O.O. along with oesophageal stricture. 5% of patients had isolated pyloric stenosis with G.O.O. without oesophageal stricture. 1% patient had peptic perforation and 1% patient had T.O.F.
- Elective surgery was done in 90% of patients and Emergency surgery was done in 10% of patients. GJ + JJ was the most common surgery done along with FJ in 8 % patients. FJ feeding was started on POD-2 to POD-3. Amount of FJ feeding ranging from 50-200 ml/hr.
- The average duration of hospitalization was ~ 10 days.
- Average weight gain at 1 month follow-up was 1.9 kg and average weight gain at 6 month follow-up was 3.7 kg.
- In 1 month follow-up, 17 patients (17.5%) and In 6 month follow-up, only 5 patients (5.6%) had developed some kinds of complains and/or complications. Most common complication during follow-up was peri-FJ leak with excoriation.
- The readmission rate was 5.15 % (5 patients) at 1 month follow-up and 1.13 % (1 patient) at 6 month follow up. Redo FJ was done done in 2 patients in 1 month follow-up and not required in 6 month follow-up.

#### CONCLUSION

 From our prospective analytic study, we can conclude that Feeding Jejunostomy done in patients of post acid injury to oesophagus and stomach had significant role and efficacy in terms of improving and maintaining the nutritional status of these patients. As these patients may require optimum level of nourishment to replenish the insult from the primary event. This can only be achieved by providing the enteral feeding preferably, as it is the most physiological route for nutrition.

- FJ feeding is easy to administer, less costly than parenteral nutrition, less care demanding with high patient compliance. It also avoids pleuro-pulmonary complications and sepsis associated with central venous catheter. The complications associated with feeding jejunostomy are within an acceptable range, normally easier to control and can be managed easily. Thus, the benefits obtained for the patients using enteral nutrition via feeding jejunostomy wholly justify the risks and the cost.
- In this study, the complications, readmission rate and mortality rate were very low, which implies that feeding jejunostomy done either isolated or along with any other major surgeries like GJ + JJ and peptic perforation repair is very efficacious in terms of rapid recovery and decreasing morbidity and mortality from primary event.

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