

## Original Research

### Clinical profile of patients with duodenal ulcer perforations

Tushar Mohan

Assistant Professor, Department of General Surgery, TS Misra Medical College, Lucknow, Uttar Pradesh, India

#### ABSTRACT:

**Background:** Peptic ulcers are open sores or lesions that develop on the inner lining of the stomach or the upper part of the small intestine. The present study was conducted to assess clinical profile of patients with duodenal ulcer perforations. **Materials & Methods:** 48 patients with duodenal ulcers of both genders were managed with simple technique of triple tube ostomy. Parameters such as time of presentation (hours), mean length of stay, and complications were recorded. **Results:** Out of 48 patients, males were 30 and females were 18. The time of presentation (hours) was <24 hours seen in 34 and >24 hours in 14 patients. The mean length of stay (days) was < 7 days in 20 and >7 days in 28 patients. The difference was significant ( $P < 0.05$ ). Post op. complications were burst abdomen seen in 3 and wound infection in 6 patients. **Conclusion:** Authors found that good postoperative outcomes can be achieved using a simple triple-tube ostomy approach for the treatment of duodenal ulcers.

**Key words:** triple-tube-ostomy, burst abdomen, duodenal ulcers

Received: 08 May, 2021

Accepted: 11 June, 2021

**Corresponding Author:** Tushar Mohan, Assistant Professor, Department of General Surgery, TS Misra Medical College, Lucknow, Uttar Pradesh, India

**This article may be cited as:** Mohan T. Clinical profile of patients with duodenal ulcer perforations. J Adv Med Dent Sci Res 2021;9(7):231-233.

#### INTRODUCTION

A duodenal ulcer is a type of peptic ulcer that occurs in the first part of the small intestine, known as the duodenum. Peptic ulcers are open sores or lesions that develop on the inner lining of the stomach or the upper part of the small intestine. Duodenal ulcers are more common than stomach ulcers.<sup>1</sup> The duodenal ulcer perforation has been known since 1600 AD when the daughter of King Charles I, Henriette Anne, had died of sudden epigastric pain and autopsy showed a perforation in the duodenum.<sup>1</sup> Edward Crisp first described the clinical aspect of 43 cases of perforated peptic ulcer in 1843 and drew the inference: The symptoms are so typical; I hardly believe it is possible that anyone can fail to make the correct diagnoses.<sup>2</sup>

Surgical intervention ranges from simple debridement and primary closure (duodenorrhaphy) of injured duodenum to much more complex procedures, such as resection and primary anastomosis of the damaged portion, pyloric exclusion, duodenal decompression or pancreaticoduodenectomy.<sup>3</sup> Triple-tube-ostomy (TTO) have been done in several cases, but not yet recommended following duodenal injury repair. TTO

entails gastrostomy, reverse duodenostomy, and feeding jejunostomy tubes insertion.<sup>4</sup> Gastrostomy and reverse duodenostomy serve to decrease tension at the repair site and help drain both gastric and duodenal secretions allowing time for anastomosis to heal, thus preventing complications. Other than intraabdominal abscesses and pancreatitis, duodenal fistulas/leak are the most life-threatening postoperative complications which may occur in about 7% of cases.<sup>5,6</sup> The present study was conducted to assess the clinical profile of patients with duodenal ulcer perforations.

#### MATERIALS & METHODS

The present study comprised 48 patients with duodenal ulcers of both genders. The written consent was obtained from all patients.

Data such as name, age, gender etc. was recorded. All patients underwent USG abdomen and endoscopy to detect the lesion. All patients were subjected to the simple technique of triple tube ostomy after the primary closure of the defect was used. Parameters such as the size of the perforation, hemodynamic stability of the patient, age of the patient, delay in

diagnoses, time of presentation (hours), mean length of stay, and complications were recorded. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

**RESULTS**

**Table I Distribution of patients**

Total- 48		
Gender	Males	Females
Number	30	18

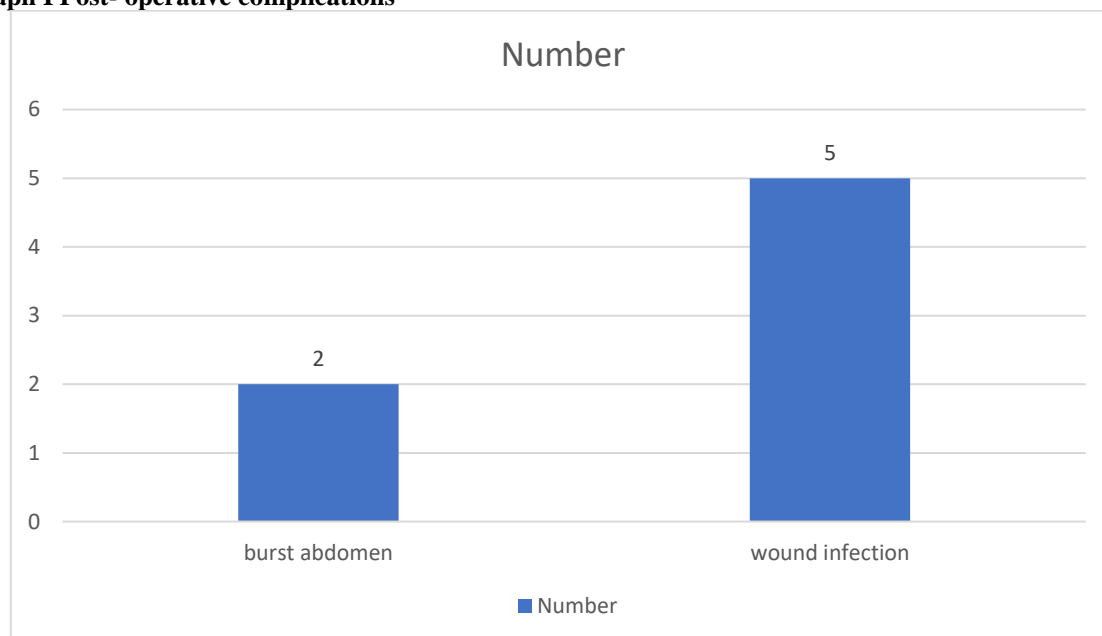
Table I shows that out of 48 patients, males were 30 and females were 18.

**Table II Assessment of parameters**

Parameters	Variables	Number	P value
Time of presentation (hours)	<24 hours	34	0.03
	>24 hours	14	
Length of stay (days)	< 7 days	20	0.05
	>7 days	28	

Table II show that the time of presentation (hours) was <24 hours seen in 34 and >24 hours in 14 patients. The mean length of stay (days) was < 7 days in 20 and >7 days in 28 patients. The difference was significant (P< 0.05).

**Graph I Post- operative complications**



Graph I shows that post op. complications were burst abdomen seen in 2 and wound infection in 5 patients.

**DISCUSSION**

Conventional surgical management options of duodenal injuries vary according to the duodenal organ injury scale (DIS), which relies upon an injury classification system from the American Association for the Surgery of Trauma (AAST), from conservative non-operative management to surgical intervention.<sup>7</sup> The triple ostomy procedure was first described by Stone and Fabian 1962. They routinely decompressed the duodenum with gastrostomy and twin jejunostomies. Later, several modifications were done in this procedure.<sup>8</sup> Depending on the size of the rupture and the patient's state at presentation, there are many methods for managing a perforated duodenal ulcer.<sup>9</sup> According to Taylor, conservative measures such as monitoring, nasogastric decompression,

antibiotics, IV fluids, and, more recently, H. Pylori Triple Therapy, can be used to treat minor, simple duodenal perforations. The most commonly used methods now are the traditional ones of primary closure with omentopaxy of the perforation, which were promoted by Cellan Jones in 1929 (Plugging the perforation with pedicled omentoplasty) and Graham in 1937.<sup>10</sup> The present study was conducted to assess the clinical profile of patients with duodenal ulcer perforations. We found that out of 48 patients, males were 30 and females were 18. Seamon et al<sup>11</sup> examined all patients with combination pancreaticoduodenal injuries and penetrating duodenal injuries >or=grade II. Age, sex, cause, injury grade, Injury Severity Score (ISS), hemodynamic stability, the existence of

vascular injury or related injuries, surgical complications, length of hospital stay, and death were compared between patients managed with and without pyloric exclusion. 14 of the 29 patients had pyloric exclusion therapy, while 15 did not. Regarding age, sex, mechanism, injury grade, ISS, hemodynamic stability, the existence of vascular damage, related stomach injuries, and death rates, both groups were comparable. A tendency toward increased rates of pancreatic fistula (40% vs. 0%), total complications (71% vs. 33%), and length of hospital stay (24.3 days vs. 13.5 days) was evident in the pyloric exclusion group. There was no duodenal fistula found in any of the patient groups. Clinical outcomes were not improved by pyloric exclusion for advanced duodenal injury or for pancreatic and duodenal injuries combined. Based on the trend of higher rates of pancreatic fistulas, longer hospital stays, and overall complications in the pyloric exclusion group, it appears that simple repair without pyloric exclusion is safe and sufficient for the majority of penetrating duodenal injuries.

We found the time of presentation (hours) was <24 hours seen in 34 and >24 hours in 14 patients. The mean length of stay (days) was < 7 days in 20 and >7 days in 28 patients. We observed post op. complications were burst abdomen seen in 3 and wound infection in 6 patients. In their study, Ali et al.<sup>12</sup> examined hemodynamically unstable patients who had undergone triple tube ostomy with primary repair of the perforation and had preoperatively been diagnosed with big duodenal ulcer perforation when they presented to the emergency room. Thirty-four individuals with massive duodenal perforations arrived in shock. Following the initial duodenal repair, all of them underwent triple-tubeostomy surgery. Thirty-two patients made a full recovery, with two deaths (5.6%). Giant duodenal ulcer perforation can be managed with a number of specific surgical methods, but they are complicated, have a high rate of morbidity and death, and need for a skilled surgeon. Based on the idea of damage control surgery, a straightforward triple-tube ostomy procedure appears to have favourable postoperative outcomes, according to a detailed retrospective examination of the patients.

## CONCLUSION

Authors found that good postoperative outcomes can be achieved using a simple triple-tube ostomy approach for the treatment of duodenal ulcers.

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