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Original Research Paper

General Surgery

PROSPECTIVE COMPARATIVE STUDY OF DRAIN VS NO DRAIN IN GASTRO-DUODENAL PERFORATION IN EMERGENCY

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ABSTRACT

Introduction: Surgical drains kept for various reasons by surgeons (1) but the necessity of the fact was tested by various studies. There is a paucity of evidence for the benefit of many types of surgical drainage and many surgeons still 'follow their usual practice'. With better evidence, management of surgical patients should improve and surgeons should be able to practice based upon sound scientific principles rather than simply 'doing what I always do.(2).

Aims: 1. To study the usefulness of drain in emergency gastroduodinal perforation.
2. To evaluate the various complications related to drain

Materials and methods: All cases operated for emergency gastro-duodenal perforations in Tirupur medical college from March 2017 to December 2019. All cases operated by same surgeon and alternate cases drain(tube drain 32) was kept. All data were collected and evaluated with post operative complications like pelvic abscess, hospital stay and local drain site sepsis. Analysis done using standard statistical methods.

Results: Total number cases were 40 among drain kept in 20 cases and no drain in 20 cases. In this gastric perforations were 16 and 24 were duodenal perforations. 2 patients developed pelvic abscess and managed with image guided aspiration. Drain site sepsis was present in 25% of patients. that 50% patients who were kept drain discharged after 5 days compared 25% in no drain.

Conclusion: We concluded that there is no advantage of drain over not keeping drain. There also avoid drain related complication and less hospital stay compared to patients with drain.

KEYWORDS : Drain, Gastro- duodenal perforations, pelvic abscess

INTRODUCTION

Surgical drains kept for various reasons by surgeons (1) but the necessity of the fact was tested by various studies. There is a paucity of evidence for the benefit of many types of surgical drainage and many surgeons still 'follow their usual practice'. With better evidence, management of surgical patients should improve and surgeons should be able to practice based upon sound scientific principles rather than simply 'doing what I always do.(2).

Aims

1. To study the usefulness of drain in emergency gastroduodinal perforation.
2. To evaluate the various complications related to drain

MATERIALS AND METHODS

Study period: March 2017 to December 2019

INCLUSION CRITERIA

1. All cases operated for emergency gastro-duodenal perforations in Tirupur medical college
2. >18 and <60 yrs included
3. Patients without co-morbidity

EXCLUSION CRITERIA

1. <18yrs >60 yrs
2. Patients with hypertension, diabetes, asthma, coronary artery disease
3. > 2 cm perforations

All cases operated by same surgeon and alternate cases drain(tube drain 32) was kept. For all patients ultra sonogram of abdomen done on post-operative day 3 and if collection found, USG guided aspirations done and sent for Culture and sensitivity. As per culture report patient was treated with sensitive antibiotics. Drain was removed if less than 30 ml. All data were collected and evaluated with post operative complications like pelvic abscess, hospital stay and local drain site sepsis. Analysis done using standard statistical methods.

RESULTS

Total number cases were 40 among drain kept in 20 cases and no drain in 20 cases. In this gastric perforations were 16 and 24 were duodenal perforations.

Table -1

	Pelvic abscess	No pelvic abscess	
drain	2	18	20
No drain	0	20	20
	2	38	40

Table-1 showed that 2 patients developed pelvic abscess and managed with image guided aspiration. In that 2 cases even though drain was kept developed pelvic abscess and drained USG guided.

Table -2

	Hospital stay <5 days	Hospital stay >5 days	
drain	10	10	20
No drain	15	5	20
	25	15	40

Table -2 showed that 50% patients who were kept drain discharged after 5 days compared 25% in no drain.

Table -3

	Drain site sepsis	No	
drain	5	15	20

Drain site sepsis was present in 25% of patients.

DISCUSSION.

Abdominal drainage following major gastrointestinal surgery has often been a matter of contention.[5,6,7]

The debated issues are whether to drain or not[6,7] or whether to remove the intraoperatively inserted drain early or late, and the implications of this.[5,8]

In our study found that there was pelvic abscess found in patients who were kept drain. And also found that drain

related local sepsis was also found in 25%(n=5) patients.

In 2004, a meta-analysis was performed to review the use of drains as early indicators of leak and as treatment.1,6 The authors performed a meta-analysis of 717 drained and 673 nondrained patients and assessed for anastomotic leak, wound infection, and respiratory complications. The authors concluded that there was no significant benefit of drainage in reducing risk of leak or other surgical complications.(3,4)

In 2004, the Cochrane Collaboration performed a systematic review of the literature on prophylactic use of drains in colorectal surgery. The review included six randomized controlled studies with 1,140 patients, comparing drainage and no drainage protocols after anastomosis in elective colorectal surgery.

In our study also found that there is less hospital stay in patients without drain compared to with drain.

By not keeping drain we can avoid the drain related sepsis which was obivious in 25% of patients.

CONCLUSION

We concluded that there is no advantage of drain over not keeping drain. There also avoid drain related complication and less hospital stay compared to patients with drain.

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