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Original Research Paper

General Surgery

A RARE CASE OF BLUNT INURY ABDOMEN,ISOLATED PARTIAL TRANSECTION OF SECOND PART OF DUODENUM- A CASE REPORT.

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ABSTRACT Duodenal perforation following blunt abdominal trauma is an extremely rare and often overlooked injury leading to increased mortality and morbidity. We report a case of isolated duodenal injury following blunt abdominal trauma and highlight the challenges associated with its management. The patient had road traffic accident ,clinically presented with diffuse tenderness and guarding . Imaging showed Pneumoperitoneum, proceeded with emergency explorative laparotomy, found to have duodenal transection of second part of duodenum and proceeded with primary closure. With the help of multidisciplinary measures and motivated patient ,transfusing multiple blood and blood products, early parenteral nutrition, D2 transection injury managed without any diversion procedure in effective way with our available resources and sound minds.

KEYWORDS : Stroke, cerebrovascular accidents, inflammatory markers

INTRODUCTION

The anatomical location of the duodenum makes diagnosis and treatment of isolated duodenal injury a difficult task. Due to its rarity and subtle clinical features, the diagnosis and management is often delayed.

The duodenum is injured due to crushing or shearing forces on the abdomen. It comprises 0.2–3.7% of all trauma related laparotomies. The incidence of duodenal injuries is 11.2–26% due to blunt trauma. On an average, one to four other abdominal organ injuries are associated with duodenal trauma, which makes the injury a rarity.

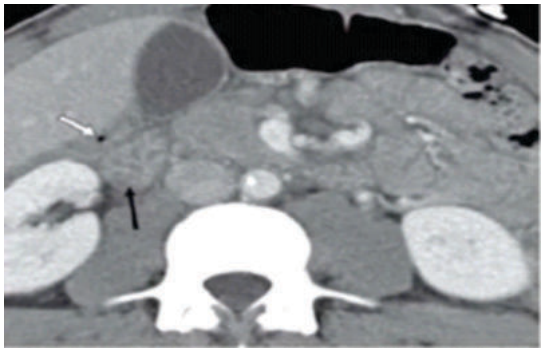
Case Report

25 year old male came to casualty with alleged history of RTA , on receiving patient was in drowsy state GCS 14/15, vitals stable, per abdomen diffuse tenderness with localized guarding over right lumbar ,hypochondrium region, right ear bleed and deformed right arm.

Investigations:

Routine blood investigations were normal ,and patient treated initially with iv fluids, antibiotics, analgesics .

1. Ct brain: bilateral frontal lobe bleed , thin SDH ,parietal bone fracture.
2. Ct abdomen : minimal free fluid pneumoperitoneum
3. Ct chest , CT whole spine :normal study



Patient was taken up for emergency laparotomy ,after getting clearance from neurosurgery and orthopaedician

Intra Op Findings

1. Extensive retroperitoneal haematoma with devitalized tissue.
2. 75% of duodenum transected.(D2)
3. Liver contusion on the inferior surface and multiple mesenteric hematoma.
4. The duodenal injury after cattell baasch manouvre was defined as grade III, that is, involving 75% of the circumference. We opted to perform primary repair of the injured duodenum in two layers alone without diversion. The abdominal cavity was drained using an open system drain next to the repair

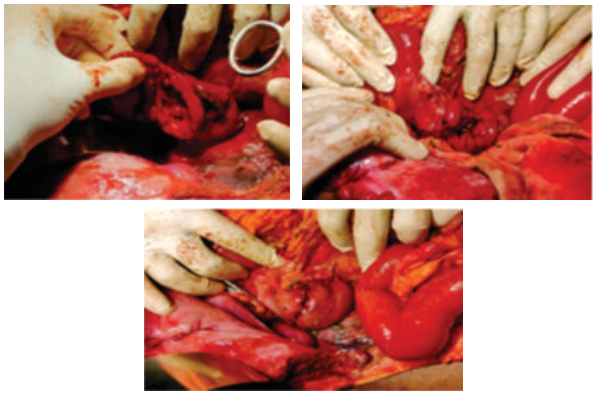


Figure 2: Intraop Findings

Post Op Events

S.NO	POD	EVENTS
1.	5TH DAY	MILD PANCREATITIS , TREATED WITH OCTREOTIDE
2.	6TH DAY	TRACHEOSTOMY
3.	11TH DAY	RYLE`S TUBE FEED
4.	14TH DAY	SUTURES REMOVED
4.	16TH DAY	DRAIN REMOVED
5.	22ND DAY	RYLE`S TUBE REMOVED AND ORALS STARTED
6.	30TH DAY	TRACHEOSTOMY REMOVED
7.	32ND DAY	DISCHARGED

With the help of multidisciplinary measures and motivated patient ,transfusing multiple blood and blood products , early parenteral nutrition, D2 transection injury managed without any diversion procedure in effective way with our available

resources and sound minds.

DISCUSSION

Problems In Management

- RETROPERITONEUM
- PROXIMITY TO CBD, PANCRAES
- PROXIMITY TO AORTA, IVC AND IMPORTANT ABDOMINAL STRUCTURES
- SECRETIONS – BILE AND PANCREATIC JUICE
- MARGIBAL BLOOD SUPPLY

There are several options to deal with duodenal injury, which range from simple repair like primary closure (duodenorrhaphy) to more complex procedures like resection and anastomosis, duodenal diverticulation,, pyloric exclusion pancreaticoduodenectomy .

5 to 6 litres of secretions pass through duodenum per day , propability of leak is therefore high.that is why till date standard procedure for duodenal perforations or transectin especially in secnd part of duodenum the treatment has been cmplex procedures; tube duodenostomy; triple ostomy; pylorus exclusion gastrojejunostomy and duodenum diverticulization procedure..

But in our patient though it has been second part duodenum partial transection ,we proceeded with primary closure in 2 layers because of the following reasons

1. Isolated duodenal injury.
2. Edges were not contaminated.
3. The transection was in lateral half of duodenum leaving medial wall and ampullary region intact.

Following the procedure ryle`s tube was inserted beyond the anastomosed site .

Everyday high output biliary secretions drained through ryle`s tube,thereby reducing the high output pressure over the duodenum.

CONCLUSIONS

Isolated duodenal injuries are challenging to diagnose because of their rare occurrence, location, and non-specific signs and symptoms. Early diagnosis is crucial as delay in diagnosis is associated with increased morbidity and mortality. The treatment depends on the type and severity of injury. The mainstay of treatment for duodenal perforation has been diversion procedures .Based on our experience with this patient managing and diagnosing isolated duodenal transection without pancreatic injury can be done with simple primary closure of duodenum even in the second part can be done without other complex diversion procedures.

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