



Post Whipple Biliopancreatic Limb Obstruction Due to Non-recurrence

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Authors' contributions

This work was carried out in collaboration between both authors. Author AAK was drafting of article. Author AJ criticized analysis and final proofreading of article. Both authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Aims: To report the biliopancreatic limb obstruction due to non-recurrence in pancreatic cancer patient.

Afferent limb obstruction has been under reported in the literature and should be recognized early and treated aggressively to prevent disasters.

We present one such case.

Keywords: *Biliopancreatic limb obstruction; pancreatic cancer; obstructive complications; adenocarcinoma.*

1. INTRODUCTION

Pancreatic cancer is a disease with high mortality and morbidity, with most of its patients not being able to be cured completely.

Those who are lucky enough to be diagnosed at an early stage undergo a major procedure with a reconstruction involving pancreatic duct, biliary duct and alimentary canal. These reconstructions then pre dispose the patient to obstructive

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complications in future life. We present the case of one such patient.

2. CASE PRESENTATION

Our patient was a 60 yr. old male who was diagnosed with adenocarcinoma of pancreatic head in 2017. He was given Docletaxel for 8 months and stayed well. Staging Ct done later showed a resectable pancreatic head tumor and he was operated for Whipple's procedure. The reconstruction done was through the anatomical pathway of the duodenum, the ligament of Treitz. The jejunum was taken through the same route and a pancreato jejunostomy and a hepatico jejunostomy was created. Distally the jejunum was brought ante-colic and an isoperistaltic gastrojejunostomy was created.

The patient stayed well for 1 year and then presented in Emergency after a year with

abdominal distention and jaundice. Surprisingly he did not complain of any vomitings. A Ct showed closed loop obstruction and no signs of local recurrence. The patient was operated upon and per operatively massively dilated biliopancreatic limb was found. It was edematous and distended. The gastrojejunostomy was patent and distal Gut collapsed. We started performing a bypass with jejuno- jejunostomy, but after putting the posterior layer, we decided otherwise. During mobilization of this dilated segment, inadvertently produced 2 small enterotomies. We used one of these to make a controlled jejunal fistula. Left the other one and closed the abdomen to come back later.

4 days later we decided to explore again in hope. But there was frank bile in the abdomen and the gut was still massively dilated. We decided to put drains and apply a vaccum dressing on the abdomen.

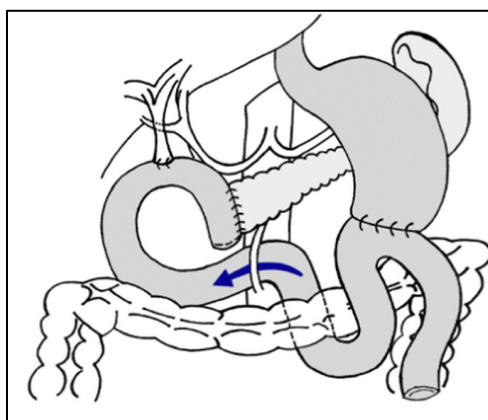


Fig. 1. Figure showing isoperistaltic gastrojejunostomy



Fig. 2. Report of CT scan

It was tedious process for 3 weeks, the jejunostomy putting out 50 ml daily and vacuum draining about 700 ml bile daily. 3 weeks later jejunostomy started putting out 700 ml and the vacuum only 50 ml. Vacuum was removed after 3 weeks and the dressing was changed twice a day. 5 days later jejunostomy is draining 1250 ml bile per day and the abdominal wound has almost closed.

The plan is to do a formal jejunostomy 3 months later when the edema has fully subsided. The reason to report this case is to report the method of reconstruction as a cause of obstruction in biliopancreatic limb, which happens rarely.

3. DISCUSSION

Whipple's procedure is a major surgery requiring technical expertise and meticulous skills. The first pancreaticoduodenectomy was performed by W. Kauch in 1912 [1]. Since then, the reconstruction done after the resection of the tumor can be done in more than one way, depending upon the personal choice of the surgeon. Each has its advantages and downsides making the decision a difficult one to choose [2,3]. The reconstruction chosen also depends upon the patients' profile and how much gastric remnant is left for use [4].

The afferent limb, also known as the biliopancreatic limb, can get obstructed due to many reasons. Recurrence of tumor is the most frequent cause [5], however other causes like stricture, staples and adhesive band have also been reported. In our case the obstruction was equivalent to superior mesenteric artery syndrome, in which the duodenum gets obstructed behind the SMA. Most of the times the patient presents with jaundice and abdominal distention. The fact that he is not vomiting at all and orally tolerating should point the clinician towards a patent gastrojejunostomy or the alimentary limb. Ct scan usually shows the point of transition proximal to the gastro jejunal anastomosis [6]. It may also show any recurrence.

The treatment of this obstruction inevitably has to be a surgical bypass [5]. Percutaneous interventions can buy time but a formal bypass is almost always needed to relieve the obstruction. In our case instead of using a percutaneous catheter insertion, we created a controlled jejunal fistula to drain the obstructed bile and pancreatic juice. There have been reports of non-surgical

interventions to decompress the afferent loop obstruction reported in literature [7,8], but surgical bypass is still favored by most surgeons and provides long term benefit in the absence of recurrence.

4. CONCLUSION

Afferent limb obstruction after Whipple's procedure has been under reported in the literature. This is a reversible cause of mortality in the absence of recurrence and should be treated aggressively. It can be avoided at the time of primary Whipple by choosing an appropriate reconstruction technique.

CONSENT

Informed consent was taken from the patient regarding this case. His privacy was maintained and kept covert.

ETHICAL APPROVAL

As per international standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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