Original Research Paper

Volume-8 | Issue-4 | April-2018 | PRINT ISSN No 2249-555X

Gastroenterology

BILIO ENTERIC ANASTAMOSIS – SHORT TERM RESULTS

Dr. Wasif Ali* Associate Professor of Surgical Gastroenterology, Osmania Medical College and Osmania General Hospital, Hyderabad. *Corresponding Author

Dr. R .Pratap Reddy Professor of Surgical Gastroenterology, Osmania Medical College and Osmania General Hospital, Hyderabad

ABSTRACT Bilioenteric anastamosis (BEA) is a surgical procedure that is performed for a range of benign and malignant diseases causing blockage of extra hepatic biliary tree. This study was undertaken to assess the short term results of BEA. Retrospective analysis of records of all patients who underwent BEA between January 2016 and December 2017 was performed. 32 patients underwent BEA during the two year period. 19 were males and 13 females, age ranged from 12-75 years (med. 49.1 years). Indication for BEA included choledocholithiasis (15 patients), chronic pancreatitis with common bile duct stricture (7 patients), benign biliary stricture (4 patients), carcinoma pancreas (3 patients), Mirrizi's syndrome (2 patients) and choledochal cyst(1 patient). Procedures performed were hepaticojejunostomy (14 patients), choledochoduodenostomy (9 patients) and BEA with another procedure (9 patients). Post operative complications included wound infection (12.5%), bile leak(6.25%) and intra abdominal collection (3.12%). There was no mortality. BEA is a safe and effective method of treatment of pathology in extrahepatic biliary tree with acceptable incidence of early complications

KEYWORDS : Bilioenteric anastamosis (BEA), extra hepatic biliary tree, Retrospective analysis, choledocholithiasis, chronic pancreatitis, benign biliary stricture.

INTRODUCTION:

Bilioenteric anastamosis (BEA) is the regularly performed surgical procedure for obstructive jaundice due to benign and malignant pathology. These procedures include by- pass of the biliary obstruction or resection of the lesion and reconstruction depending on the cause and site of obstruction. The surgical procedure included in BEA are hepaticojejunostomy, choledochojejunostomy, choledo-choduodenostomy and cholecystojejunostomy. Different surgical techniques are used for the creation of BEA. All of these surgical procedures are associated with short and long term complications [1-3].

The short term complications include anastamotic leak, bleeding, wound infection, intra abdominal collection, cholangitis. The long term problems include anatamotic stenosis, recurrent cholangitis, and liver abscess. The objective of this study was to evaluate the short term results and post operative complications of BEA. This is a retrospective descriptive study. BEA procedures have been found to be safe and effective in relief of biliary obstruction (1,2) and provide long term relief from jaundice in a single time procedure [4-6].

PATIENTS AND METHODS:

The case records of all patients who underwent BEA between January 2016 and December 2017 were analyzed retrospectively with focus on post operative complications and short term results. Data of patient age, sex, indication for surgery, the type of surgical procedure performed, intra operative details and post operative problems were recorded and analyzed.

Depending on the location of the biliary obstruction and cause of biliary obstruction patients underwent side to side choledo-choduodenostomy in single layer interrupted 3'0' polygalactin or Roux en Y side to side hepaticojejunostomy in single layer with interrupted 3 '0' polygalactin. The BEA procedure was combined with another surgical procedure depending on the pathology. Some patients underwent gastrojejunostomy or lateral pancreaticojejunostomy along with BEA. Tube drain was placed in sub hepatic space in all patients. Post operative records were looked for mortality and morbidity. The complications looked for in the early post operative period included anastamotic leak, intra abdominal collection, bleeding , cholangitis and wound infection.

RESULTS

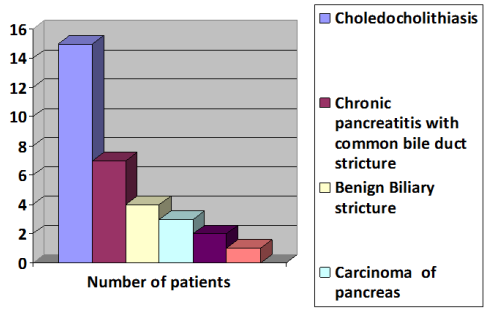
Thirty two patients had undergone BEA during the period of two years. Nineteen of the patients were males and thirteen were females. Age of the patients ranged from 12 years to 75 years (median- 49.1 years). Indication of surgery (BEA) included choledocholithiasis (15 patients), chronic pancreatitis with common bile duct stricture (7 patients), benign biliary stricture (4 patients), carcinoma head of pancreas (3 patients), Mirrizi's syndrome (2 patients), and choledochal cyst (1 patient).Table I

The surgical procedure performed alone or along with another procedure included roux en Y hepaticojejunsotomy (14 patients), choledochoduodenostomy (9 patients), hepaticojejunostomy and lateral pancreaticojejunostomy(5 patients), choledochoduodenostomy and lateral pancreaticojejunostomy (1 patient) and hepaticoje-junostomy and gastrojejunostomy (3 patients). Post operative complications included wound infection in four patients (12.5%) and all these patients had pre operative ERCP and stenting of common bile duct. All the patients needed drainage of wound collections and antibiotics. Two patients (6.25%) had leakage of bile from drain tube which subsided over period of four to seven days . Both these patients had undergone hepaticojejunostomy as BEA procedure.

One patient (3.12%) had intra abdominal collection which was aspirated under ultrasound guidance. None of the patients had bleeding or cholangitis and there was no mortality in this study group. Over all mortality was 0% and over all morbidity of 21.8%. Table II.

Table I: Indications for surgery – bilio enteric anastamosis

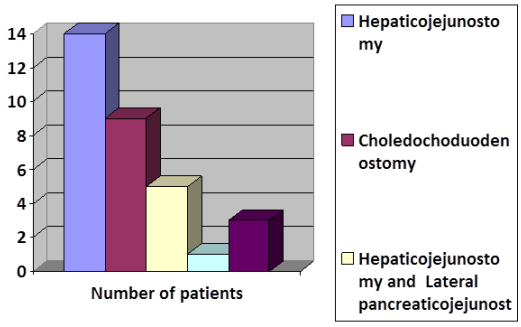
Indications for surgery	Number of patients
Choledocholithiasis	15
Chronic pancreatitis with common bile duct stricture	7
Benign Biliary stricture	4
Carcinoma of pancreas	3
Irriz's syndrome	2
Choledochal cyst	1



Graph 1: Indications for surgery – bilio enteric anastamosis of the patients.

Table II: Surgical procedures performed

Procedure	Number of patients
Hepaticojejunostomy	14
Choledochoduodenostomy	9
Hepaticojejunostomy and Lateral pancreaticojejunostomy	5
Choledochoduodenostomy And Lateral pancreticojejunostomy	1
Hepaticojejunostomy and Gastrojejunostomy	3



Graph 2: Surgical procedures performed on the patients.

DISCUSSION:

BEA is associated with early post operative complications but most of the complications can be managed conservatively. Wide range of complications of BEA have been reported, ranging from 1.6% to 33 %(1,3). Kadaba et al (2) reported a large series of 462 bilio enteric anastamosis and 75 % of then were performed for malignant diseases and hepaticojejunostomy or choledochojejunostomy was done in 95% of the patients. They reported a mortality of 6.5% and bile leak in early post operative period to be 3.7%. In another series (3), the post operative complications were seen in 33% of patients following hepaticojejunostomy, In another study on choledoduodenostomy (1) for stone diseases the post operative complications rates were low, with incidence of cholangitis being 1.6%. Leppard et al (4) in 2011 reported complications rates after choledoduodenostomy to be 19%. In this series the incidence of intra abdominal abscess was 26%, wound infection was 20% and bile leak was 13%. In another study (5) of patients of benign biliary stricture undergoing hepaticojejunostomy, the incidence of post operative complications was 21%.

Blankensteijn et al (6) compared the results of choledochoduodenostomy and choledochojejunostomy and found that choledochoduodenostomy had a lower mortality rate (4.7%) compared to choledochojejunostomy (12.2%). The postoperative complications were also lower after choledochoduodenostomy (10.9%) than after choledochojejunostomy (28.6%).

CONCLUSION

BEA is a safe procedure for treatment of lesions in the extra hepatic biliary tract. This surgical procedure has an acceptable short term complication rate. Furthermore, various advanced surgical procedures can also be inculcated for the ease in the BEA for the lesions treatment in the extra hepatic biliary tract.

REFERENCES:

1. Okamoto H, Miura K, Itakura J, Fujii H. Current assessment of choledochoduodenostomy : 130 Consecutive series. RCS Annals 2017; 99:545 -549
2. Kadaba RS, Bowers KA, Khorsandi S, Hutchins RR, Abraham AT, Sarker SJ et al Complications of biliary-enteric anastamoses. RCS Annals 2017; 99: 210-215
3. Rothlin MA, Lopfe M, Schlumpf R, Largiader F. Long-term results of hepaticojejunostomy for benign lesions of the bile duct. Am J Surg 1998; 175: 22-26
4. Leppard WM, Shary TM, Adams DB, Morgan KA. Choledochoduodenostomy : Is it really so bad ? J Gastrointest Surg 2011; 15: 754-757
5. Tocchi A, Mazzoni G, Liotta G, Lepre L, Cassini D, Miccini M. Late development of bile duct cancer in patients who had biliary-enteric drainage of benign disease: a follow up study of more than 1000 patients. Ann Surg 2001; 234: 210-214
6. Blankensteijn JD, Terpstra OT. Early and late results following choledochoduodenostomy and choledochojejunostomy.HPB Surg 1990; 2:151-158