ORIGINAL ARTICLE

Management of Biliary and Pancreatic Fistulae by Fistulojejunostomy

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ABSTRACT

Objective: To find out the outcome of fistulojejunostomy after traumatic biliary and pancreatic fistulae
Study design: descriptive
Setting: Combined Military Hospital Bahawalpur
Duration of study: 1993 -2006
Patient and methods: During the period September 1993 to September 2006, a total number of 6 cases biliary and a case of pancreatic fistulae were treated at combined military hospital Bahawalpur. All those patients who got surgical trauma to biliary surgery leading to biliary fistulae included in study. Patients who developed pancreatic fistulae after the debridement of pancreatic necrosis following acute pancreatitis also included in the study. Fistulous track dissected out deep to its origin, excised its excessive redundant part and then Rou-en-Y fistulojejunostomy (Retro-Colic) carried out in all these case.
Results: There had been leakage of bile from the nearby drainage tube, in two cases, which gradually stopped after 7 to 14 days. In five cases, there had been no leakage of bile from fistula-jejunostomy site.
Conclusion: Fistula-jejunostomy is an excellent procedure for the management of biliary and pancreatic fistulae, where the surgeon is inexperienced in surgical repair of biliary and pancreatic ductal injuries and where the modern modalities like ERCP, PTC and choledochoscopic interventions are not available.
Key word: Chronic biliary and pancreatic fistulae ---- Fistulajejunostomy

INTRODUCTION

The biliary and pancreatic fistulae are very notorious for their rapid fluid losses, electrolyte imbalances and sepsis[1]. Most common, trauma to biliary tract is iatrogenic and sustained during cholecystectomy operation[2]. Bile leakage may be due to direct trauma to hepatic biliary confluence Rt. Hepatic duct, common hepatic duct, common bile duct, cutting of large size accessory biliary duct in gall bladder bed area and by slipping of ligature from cystic duct. Early direct surgical repair of these fistulae is hazardious except, ligation of accessory biliary duct, and re-suturing of slipped cystic duct ligature[3]. In our series we had wide bore drainage (26F Foleys Catheter) of biliary and pancreatic fistulae. Three months allowed for maturation of fistulous track, meanwhile special interest was taken for correction of fluid electrolyte in balance, anaemia, nutrition and sepsis. Later on fistulous track dissected out, excised its excessive redundant part and than Fistulajejunostomy Roun-en-Y performed.

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PATIENTS AND METHOD

During the period September 1993 to September 2006, a total number of six cases of biliary and one case of pancreatic fistula were treated at Combined Military Hospital Bahawalpur. During this period, 51 cholecystectomy operations carried out. Out of these 45 (98.11%) were male. Their main age group was 42 years. Four males and five females were very thin built while two male and 40 female, heavy built.

Out of these 51 cholecystectomy operations, two patients developed biliary fistula in this hospital while other four cases of biliary fistula were initially operated out side in civil for Gall bladder disease (cholecystectomy). One male patient had a posttraumatic gangrene and abscess formation, in the body of pancreas. Open drainage, after Debridement of necrozed pancreatic tissue, lead to the chronic pancreatic fistula formation (high out put > 700 ml daily for three months). Suspected transactional injury to main pancreatic duct could not be ruled out. In all these biliary and pancreatic fistulae, wide-bore tube drainage (26 Foleys Catheter) carried out, at least for 3 months. Fistulous track dissected out deep to its origin, excised its

excessive redundant part and then Roun-en-Y fistula-jejunostomy (Retro-Colic) carried out in all these case.

RESULTS

There had been leakage of bile from the near by drainage tube, in two cases which gradually stopped after 7 to 14 days. In five cases, there had been no leakage of bile from fistula-jejunostomy site. Two patients lost in follow up, one left against medical advice and she died at home due to concurrent pneumonia. While rest of remaining four cases, are having no signs and symptoms of stenosis at the site of fistula-jejunostomy, for the last one year.

The treatment of biliary and pancreatic fistulae involves the reconstruction of original biliary/pancreatic-enteric continuity. In general, drainage of abscess, correction of fluid electrolyte imbalance, hypoproteinemia and anaemia take precedence and are carried out before definite attempts are made to repair these fistulae. Injuries to biliary passages, recognized at time of operation, should be corrected during surgical procedure immediately, by the help of experienced surgeon if available. Certain procedures like, repair by direct suture of defect over a T-tube, vein patch graft, flaps of cystic duct stump, pedicled flaps of jejunum and Roun-en-Y loop of jejunum, as a serosal patch, have been tried by certain surgeons with variable results. Biliary injuries recognized in immediate postoperative period, presents in one of the following two ways:-

1. Biliary Fistula
2. Biliary collection

If there is persistent bile leakage from a drainage tube, put near the gall bladder bed area after cholecystectomy, than always try to avoid early re-operation. The patient is not jaundiced, all the biliary passages are collapsed and surgical repair of defect is very difficult, except re-suturing of slipped suture of cystic duct or re-suturing of accessory bile duct. A cautious approach is preferable because even ultimate closure of fistula, with development of jaundice, is usually associated with proximal ductal dilation and easier subsequent repair. In such biliary fistulae, if fistulography, PTC and ERCP studies reveals, any continuity and potency between biliary system and GIT, than a prolonged period of drainage, if well managed, may result in closure of fistula spontaneously. Other wise managed if fluid loss, from biliary fistula is two heavy and too prolonged, than external biliary/pancreatic fistula can after some weeks or months, be converted into an internal fistula-jejunostomy. Second presentation of biliary ductal injuries in post operated period is, in the form of biliary peritonitis. The situation is very serious. Immediate re-exploration is essential, two save the life of the patient. Here there are two options, either to treat it with wide bore drainage tube for few weeks/months later on fistula-jejunostomy can be carried out in these cases. However, if condition of patient permits than external drainage of bile is carried out through a mobilized Roun-en-Y loop of jejunum, the external drainage tube simply being led in a transjejunal fashion, to the exterior. However, no immediate surgical repair is possible, as the biliary ducts are collapsed; the tissues are bile stained and friable.

CONCLUSIONS

Fistula-jejunostomy is an excellent procedure for the management of biliary and pancreatic fistulae, where the surgeon is inexperienced in surgical repair of biliary and pancreatic ductal injuries and where the modern modalities like ERCP, PTC and choledochoscopic interventions are not available. This procedure is safe, efficacious and cost effective. Most of the surgeons, who are not trained in dealing the pancreatic and biliary ductal injuries, can do to the satisfaction of the patients.

REFERENCES

1. A Cuschieri GR Gilles AR Mossa. Essential surgical practice 2nd Edition biliary tract PP 1065 Biliary fistula PP 38. Pancreatic fistula PP 39.
2. Bailey and Loves short practice of surgery twenty-two Edition biliary fistula PP 749 pancreatic fistula PP 755.
3. Davis Christopher textbook of surgery 12th edition gallstones ileus and fistula PP 1273, 1274. Pancreas and duodenum PP 402.
4. Maingot's abdominal operation volume I & II 9th Edition Biliary Fistula PP 58 329 330 330 1490-91. Pancreatic fistula PP 331 496 498 1578-1581 1579-1580.
5. R.F Rantoul. Farquharson textbook of operative surgery eighth edition. Operations for biliary fistula PP 439. Pancreatico jejunostomy PP 444-448.
6. Lexakis N, Sutton R, Neoptolemos JP. Surgical treatment of pancreatic fistula. Dig Surg. 2004;21:262–274
7. Tsiotos G, Smith C, Sarr M. Incidence and management of pancreatic and enteric fistulas after surgical management of severe necrotizing pancreatitis. Arch Surg. 1995;130:48–52.