ORIGINAL ARTICLE

Compare the Post-Operative Morbidity Cystogastrostomy and Cystojejunostomy among Pancreatic Pseudocyst Patients

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ABSTRACT

Objective: The aim of this study is to compare the post- operative morbidity in cystogastrostomy and cystojejunostomy among pancreatic pseudocyst patients.

Study Design: Randomized clinical trial

Place and Duration: It was amulti centers studyand conducted at Surgical Department KuwaitTeaching hospital Peshawar, Bakhtawar Amin Medical & Dental College, Multan and Surgical UnitDHQ/MMMT hospital DI Khan. Study was conducted for duration of six months from 1st January to June 30th, 2018.

Methods: Total 140 patients of both genders were presented in this study. Patients were aged between 20-60 years of age. Patients detailed demographics were recorded after taking informed written consent. Patients were divided into two groups, group I had 70 patients and received cystogastrostomy while group II received cystojejunostomy with equal number of patients. Follow up was taken among pancreatic pseudocyst patients in duration of 3weeks to compare morbidity (recurrence, failure and complication. Complete data was analyzed by SPSS 22.0 version.

Results: Total 66 (47.14%) patients were males (33 in each group) and 74 (52.86%) patients were females (37 in each group). Mean age of the patients in group I was 45.08±8.21 years with mean BMI 26.14±4.14 kg/m^2 and in group II mean age was 46.14±6.17 years with mean BMI 25.41±4.15 kg/m^2. Frequency of recurrence was high among patients of group I 28 (40%) as compared to group II 12 (17.14%) with p value (0.04). Failure rate was 8 (11.43%) in group I and in group II was 4 (5.71%). Frequency of complication was also observed higher in cystogastrostomy group as compared to cystojejunostomy group.

Conclusion: We concluded in this study that post-operative morbidity such as frequency of recurrence was higher among patients of cystogastrostomy as compared to cystojejunostomy.

Keywords: Morbidity, cystogastrostomy, cystojejunostomy, pancreatic pseudocyst

INTRODUCTION

The pseudocyst management algorithm is rapidly evolving. Operations remain the standard in care, although they are increasingly essential for endoscopic drainage. According to the updated Atlanta classification, the minimum necrosis (previously included as a pseudocyst that was considered as walled off necrosis (WON)) and pseudocyst are considerably overlapping. [1] Just 5 studies have been published to date, involving a randomized trial comparing endoscopic with surgical drainage. [2-6] In addition, pseudocysts were included with both acute and chronic pancreatitis along with variable necrosis detail. Endoscopic retrograde cholangiopancreatography (ERCP) has been used in some of these studies to record the site of leakage, though ERCP-related morbidity and mortality have not been considered. Endoscopic cystogastrostomy (ECG) can be known as first-line pseudocyst therapy, which is less invasive than surgical drainage and which is normally performed in a sedative state.

Although it remains controversial to indicate and schedule an operation in PP with regard to acute pancreatitis, a common accord remains that massive, recurrent and symptomatic cysts ought to be drained, as they normally include complications. Interior drainage of PP may be done through surgical or endoscopic procedures, which are the method of choice. Endoscopic treatment is a promising approach, however, involves an experienced endoscopy specialist, and may be associated with stent-related complications, improper drainage, multiple procedures and perforation risk6. The chief method in PP drainage remains surgery. Laparoscopic PP surgery is minimally invasive and gives information on PP position and the relationship with adjoining organs. J. Petelin[7] initially conducted laparoscopic cystogastrostomy in 1994. There is low morbidity, PP wall biopsy can be achieved and cholecystectomy in presence of biliary pancreatitis can be added to the treatment. Several procedures, including previous and subsequent cystogastrostomies, endoscopical surgery and cystoyunostomy, have been documented so far for laparoscopic PP operations. [8]

A variety of methods can be employed for treating PPC: percutaneous catheter drainage, support for endoscopic ultrasound, laparoscopic operation or open internal drainage. However, it is still uncertain when and how to choose the right surgical form. The classical technique for PPC therapy, the Open Internal Drainage Surgery is suggested for a large number of cases. [9–11]

MATERIAL AND METHODS

This randomized clinical trial was conducted at Surgical Department KuwaitTeaching hospital Peshawar, Bakhtawar Amin Medical & Dental College, Multan and Surgical UnitDHQ/MMMT hospital DI Khan. Study was conducted for duration of six months from 1st January to June 30th, 2018 and it was comprised of 140 patients. Baseline details of patients including age, sex and body mass were calculated after taking written consent. Patients who underwent endoscopic papillary drainage, patients with incorrigible deranged coagulation profile and pregnant women were excluded from this study.

Patients were aged between 20-60 years. Patients were divided into two groups, group I had 70 patients and received cystogastrostomy while group II received cystojejunostomy with equal number of patients. Follow up was taken among pancreatic pseudocyst patients in duration of 3weeks to compare morbidity (recurrence, failure and complication. Chi square and fissure exact test was performed. Categorical variables were assessed by frequency and percentage but descriptive variables were calculated by standard deviation. Complete data was analyzed by SPSS 22.0 version.

RESULTS

Total 66 (47.14%) patients were males (33 in each group) and 74 (52.86%) patients were females (37 in each group). Mean age of the patients in group I was 45.08±8.21 years with mean BMI 26.14±4.14 kg/m^2 and in group II mean age was 46.14±6.17 years with mean BMI 25.41±4.15 kg/m^2. (table 1)

Table 1: Baseline details of enrolled patients

Variables	Group I (n=70)	Group II (n=70)
Sex		
Male	33 (47.14%)	33 (47.14%)
Female	37 (52.86%	37 (52.86%
Mean age	45.08±8.21	46.14±6.17
Mean BMI	26.14±4.14	25.41±4.15

Table 2: Comparison of recurrence and failure rate among both groups

Variables	Group I	Group II
Recurrence		
Yes	28 (40%)	12 (17.14%)
No	42 (60%)	58 (82.86%)
Failure rate		
Yes	8 (11.43%)	4 (5.71%).
No	62 (88.57%)	66 (94.29%)

Table 3: Association of complications among both groups

Variables	Group I	Group II
Peritonitis		
Yes	3 (4.29%)	0
No	67 (95.71%)	70 (100%)
Anastmosis leakage		
Yes	11 (15.71%)	6 (8.6%)
No	59 (84.29%)	64 (91.4%)
Pneumoperitoneum		
Yes	6 (8.6%)	4 (5.71%)
No	64 (91.4%)	66 (94.29%)
Bleeding		
Yes	10 (14.29%)	4 (5.71%)
No	60 (95.71%)	66 (94.29%)

Frequency of recurrence was high among patients of group I 28 (40%) as compared to group II 12 (17.14%) with p value (0.04). Failure rate was 8 (11.43%) in group I and in group II was 4 (5.71%). (table 2)

Frequency of complication was also observed higher in cystogastrostomy group as compared to cystojejunostomy group. (table 3)

DISCUSSION

Pancreas pseudocysts are common cystic pancreatic lesions. pancreas are very common. The 75%-80% of all such pancreatic lesion are the pseudocyst lesions. [14] This may be the product of acute and chronic pancreatitis, with common nausea, pain and vomiting symptoms. Two operations for the treatment of the pancreatic pseudo-cyst according to the site of the cyst are cystogastrostomy and cysto-jejunostomy. [15]

In present study, total 140-patients of pancreatic pseudocyst were included. Total 66 (47.14%) patients were males and 74 (52.86%) patients were females. Mean age of the patients was 46.44±10.11 years with mean BMI 26.98±8.74 kg/m^2 . These findings were comparable to the previous some studies.[12,13] In this data, cysto-gastrostomy was shown to be high in comparison with cysto-jejnostomy (p=0.04). Oh et al. estimated that surgical cysto-gastrotomy. recurrent incidence was 5 percent compared to endoscopic cysto-gastrostomy. [16] But park et al. also indicated that cysto-jejunostomy is an excellent treatment if a cyst does not apply at the minimum rate of recurrence to stomach or twin wall. [17]. Another related study recorded 9% recurrence in surgical cysto-gastrostomy compared with other pancreatic pseudocyst therapies. [18]

The failure rate in cysto-jejunostomy was lower in comparison with cystostomy in the present study. Cysto-gastrostomy and cysto-jejunostomy were confirmed to be preferred procedures in resource-limited areas. With staplers and sutures, all procedures can be carried out. However, in comparison with cysto-gastrostomy cysto-jejnostomy was less likely to fail. Usage of stapled anastomosis is smoother and prevents leakage following surgery in both processes. [19]

In this research, alcohol consumption and gallstones were the most common etiology for pancreatic pseudocyst. Shamaetal. said that pancreas pseudocysts are most often caused by gallstones. [20] Yang and others, however, have indicated that the most common causes of pancreatic pseudocysts are alcohol abuse and postoperative trauma. [21] The report of the Commission's opinion.

This study shows lower cystoyunostomy complications in comparison to cystogastronostomy (p>0.05), including bleeding, pneumoperitoneum, peritonitis, and anastomosis leaks. SW et al. indicated that complications of the laparoscopic cystogenesis were lower in comparison to the operative cystogenesis (0 percent vs 10 percent). [22] A similar trial has shown that leakage of anastomosis is the most common complication compared to cysto-jejunostomy in cystogastrostomy. [23] Sandulescuet al.[24] recorded a 77 percent (10/13) success rate using endoscopic techniques in a further comparative study of pseudocyst drainage. The bleeding at the puncture site was the cause of a failure in the

remaining three patients, dense pseudocyst wall and thick contents. The prevalence of cystigastrostomy in comparison to cystojejunostomy was high in terms of high recurrence. Both procedures can, however, be used in restricted resource areas based on the position of the pancreatic pseudocyst.

There is graded recognition of the pancreas pseudocysts and a rise in the number of patients. Although the pancreatic pseudocysts are of different clinical types, the basic treatment concept is principally to resolve the irregular pancreatic drainage.

CONCLUSION

We concluded in this study that post-operative morbidity such as frequency of recurrence was higher among patients of cystogastrostomy as compared to cystojejunostomy.

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