EXPLORATIVE LAPAROTOMY VERSUS CONSERVATIVE MANAGEMENT IN ACUTE PANCREATITIS

Dr. Ali Nayyef Assi [CABS]*
Dr Fadhil G. Al Saaedi [CABS]**
Dr. Muslim K Kadeem [FICMS]*

ABSTRACT

BACKGROUND Acute pancreatitis is common disease, the two major etiological factors responsible for acute pancreatitis are alcohol and cholelithiasis .

Patients and methods This study was done in the emergency department (ED) in AL- Hussein. teaching- hospital (Al Nassyria) during 2 years (between 1st janurary 2009 to 31st December 2010) about 39 patients presented as acute abdomen proved later on as acute pancreatitis , all patients were presented to the emergency department with acut abdominal pain .19 patients had reports suggested that they had features suspected perforated viscus[a history of more than 72 hours of sever abdominal pain with abdominal distention,free fluid in the peritoneal cavity] so their conditions were mandated exploratory laparotomy . While the other (20 patient) had less feature of abdominal distention, not dehydrated and near normal vital sign so they were postponed to the early morning and re-evaluated by C.T scan of the abdomen and complete evaluation of Ransons criteria which confirm that they had a cute pancreatitis and treated conservatively.

Aim of study Comparison between conservative versus operative management in acut pancreatitis.

Results Patients in group 1 (Conservatively managed patient) required relatively less hospital stay than the patient in group 2 (explored patient),but complications like pseudo cyst of pancreas,bilateral pleural effusion occurs mores in group 1.

Conclusion Early washout of abdominal cavity by explorotive surgery or other minimal access pruceduers was advocated in management of acute pancreatitis.

KEYWORDS Acut pancreatitis ,conservative vs operative management.

INTRODUCTION

Acute pancreatitis is a common disease with an annual incidence of between 5 and 8 people per 100 000 of the population. The two major etiological factors responsible for acute pancreatitis are alcohol and cholelithiasis (gallstones).(1)Acute pancreatitis is defined as a cute condition presented with abdominal pain and usually associated with raised pancreatic enzymes in blood or urine as a result of inflammatory disease of pancereas.(2).The two major causes of a cute pancreatitis are biliary calculi and alcoholism while height protein diet contributed to few case of a cute pancreatitis .the clinical feature of the disease is symptoms of epigastric and right hypochondereal pain and flunks pain radiated to the back which are non-specific features with elevated serum amylase above 1000 smoggy units with ultrasonography and plain abdominal radiography can help in the diagnosis of a acute pancreatitis. The course of

* Department of Surgury - Thi Qar Medicl College
** Thi Qar Health Department

pancreatitis varies and the criteria which identify high risk patient have been identify by Ransons which are old age, extent of raise in blood sugar white cell count, liver function test , blood urea ,fall in serum calcium ,haematocrit and arterial oxygen tension and volume of fluid accumulated in extra vascular spaces (third space collection).The mainstays of treatment are bed rest intravenous fluid , nasogastric suction and pain control with opiates (pethidine) with antispasmodics.(3) Surgery should be considered in a cases whose pancreatitis fails to resolve after 7 days if there is evidence of a local complication,(4) but exploratory laparotomy which was done in 19 patient because they were presented as a cute abdominal condition with clinical features suggestive of perforated viscous preoperatively they were diagnosed as acute pancreatitis by finding fat necrosis in the omentum and transverse mesocolon and large volume of fluid in some of patients it is bloody stained fluid (haemorrhagic) found in two cases.

PATIENTS & METHODS

The study was carried out at AL-Hussein Teaching-Hospital on thirty nine patients of either sexes ,divided them into 2 groups .First group 19 patients who consuled the hospital at holidays period where there is no possibility for full evaluation was diagnosed as a cases of acute abdomen depending on clinical examination and simple available investigation (blood tests , plain X ray), all Those patient undergo exploratory laprotomy after correction of their dehydration, gastric decompression and covered by intravenous broad spectrum antibiotic (claforan+Flagyl) and Foley catheter inlaying for monitoring of urine output which indirect observation for good fluid replacement . Second group 20 patients presented at daytime so we could investigated by (US and CT scan, serum amylase and other Ranson criteria investigations) and confirm the diagnosis of a cute pancreatitis and they were treated conservatively .During exploration of the 19 patients the findings were :-

1. Large amount of bloody stained fluid filled the peritoneal cavity and pelvic region.
2. Fat necrosis in the greater momentum and transverse mesocolon .
3. Oedema in the supracolic region..

The surgical procedure limited on:

1)suction of the peritoneal fluid.

2)confirmation there is no necrotic area around the tail and body of the pancreas .

3)Examination of all other abdominal viscera which were looked intact.

4)Washing the peritoneal cavity by warm normal saline & suction .

5) 5 of 19 patients with laparotomy drain left near the tail of pancreas while the rest closed with out drainage , the use of the drain depending on the severity of edema and fat necrosis especially at the tail of the pancreas as aprophylaxis for abscess formation which is not developed post-operatively.

RESULTS

This study included 39 patients (male 30; female 9) , 22-82 years old. 20 patients diagnosed by clinical examination , investigation US and CT scan and proved to be acute pancreatitis and treated conservatively . 19 patients consulted the hospital at holidays period where there is no possibility for full evaluation and most of them reffered from peripheral hospitals, and to whom exploratory laparotomy was done . Patients in group 1 (Conservatively managed patient) required relatively less hospital stay period than the patient in group 2 (explored patient).but complications like Pseudo cyst of the pancreas occurs in 4 patient (20%) in group one while non of patients in group 2 develops pseudo cyst of the pancreas . One child with post traumatic a cute pancreatitis was died in the first post-operative period because there is associated other intra abdominal organs injury (spleen and rupture of fourth part of duodenum so we excluded from study . Other complicated includes bilateral pleural effusion which is developed in 5 (26%) of group 2 while 8 pateints (40%)

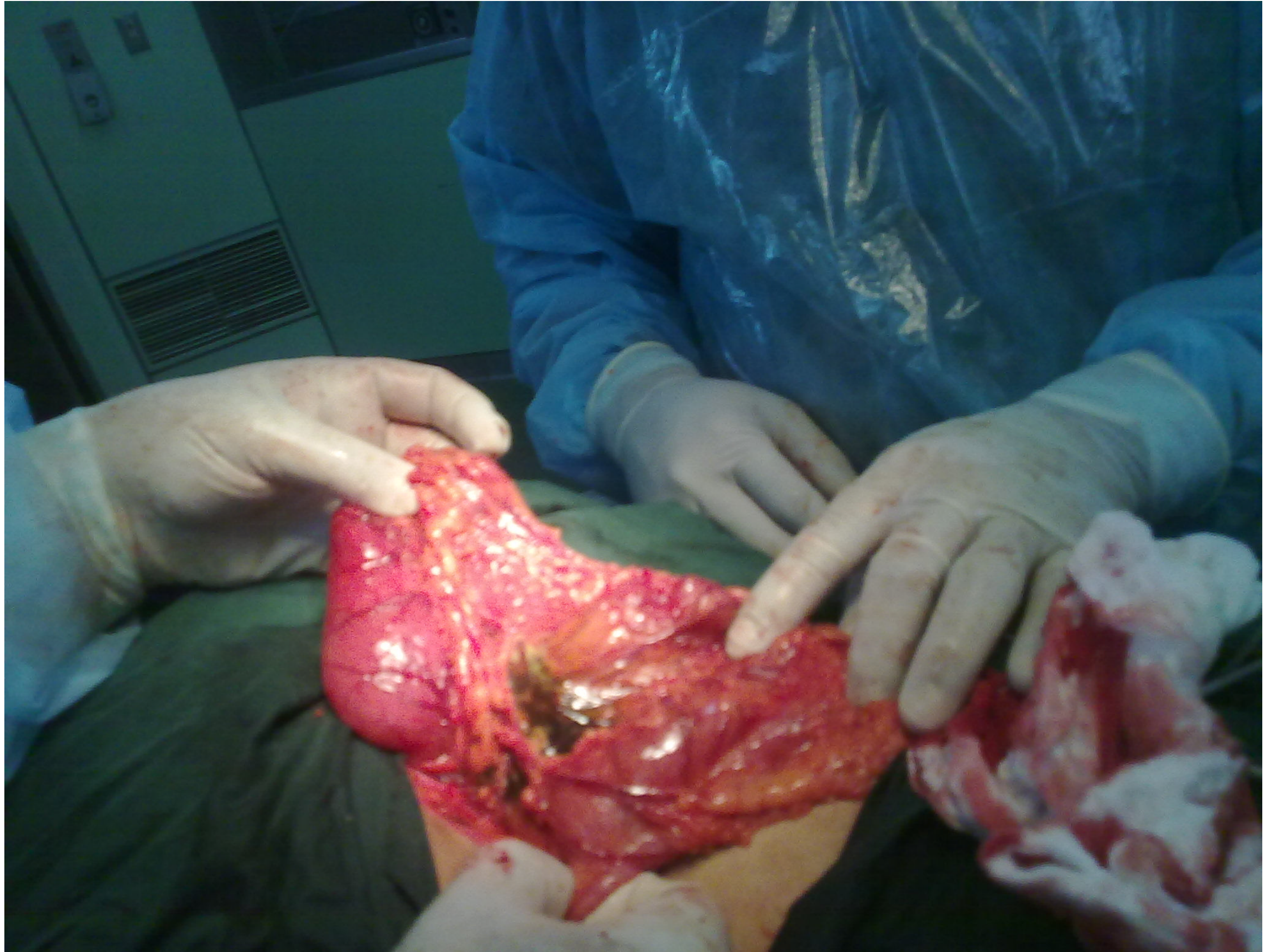
patient (who developed pleural effusion) from group 1. Seven patient (17.5%) show elevation of their serum bilirubin which is subsided within 7-10 days in both groups.
Surgical site infection followed by wound dehiscence in 2 patients in group 2

DISCUSSION

Adefinite diagnosis of acute pancreatitis cannot be made only by history &clinical examination, may need to be differentiated from other causes of acute abdominal pain , Ranson criteria ,ultrasound and CT scan may helpfull all these measures can be done at daytime while patient with acute upper abdominal pain who presented with long period more than 3 days of his illnes and some time with us reports of free fluid in the peritoneal cavity raise the possibility of perforated viscous ,so explorative laparotony was indicated .(5)
The risk factor for developing acute pancreatitis is alcohol , one of the two major etiological factors responsible for acute pancreatitis,and several studies have attempted to quantify the risk of acute alcoholic pancreatit (1)
Cholelithiasis is another major etiological factor responsible for acute pancreatitis. According to a study was done in the United States, 89 (3.4%) of 2583 cholelithiasis patients developed pancreatitis during the follow-up period (8) while in our study [table 3] most of causes is non specific (idiopathic) only 4 patients [10%] was due to gallstone , one patient[2.5%] due to alcohol .
In this study we found that peroperative wash out the peritoneal cavity with warm normal saline will dilute the exudative fluid which contain high concentration of pancreatic enzymes and this will result in decrease in pulmonary complication (pleural effusion) , pseudo cyst of the pancreatic will not developed post operatively because that the lesser sac was entered while 4 (20%) patient of conservatively treated patient developed pseudocyst which resolved by conservatively measures and follow up by repeated abdominal us. The explored patients stay for a long period than conservatively treated patient.
Early surgery was advocated in order to remove the focus of infection and terminate the inflammatory process however the inflammatory cascades are not easily switched off and are compounded by the surgery is more difficult because necrotic tissue resulting in significant risk. ,Additionally early surgery may infect sterile necrosis but delayed surgery may allow time for stabilization of the patient and the more easy removal of well-demarcated necrosis there is a balance between operation too early and leaving it too late and the decision needs to be individualized the decision is aided by close surveillance, the value of peritoneal lavage in removing enzyme rich ascites remain unclear and effectiveness in reducing the mortality risk of severe acute pancreatitis remain unproven.(2)
There has been a change in the treatment for necrotizing pancreatitis from an aggressive policy favoring early surgerical intervention to amore conservative strategy of delayed and less invasive intevenation of the patient clinical trajectory with frequent clinical review and daily CRP (c - reactive protein) measurement from a review of published studies the lowest mortality is associated with surgery after 3-4 weeks however the clinical picture should be the primary detervention(3).
We compare our study with other study done in USA to evaluate the utility of the different treatments for pancreatic ascites they found that conservative therapy is not advisable for pancreatic ascites because of the high proportion of failures. Interventional therapy with surgery or transpapillary stent has a positive effect in clinical outcome (7).

CONCLUSION

Early washout of abdominal cavity by explorotive surgery or other minimal access pruceduers was advocated in management of acute pancreatitis in order to remove the focus of infection and terminate the inflammatory process.



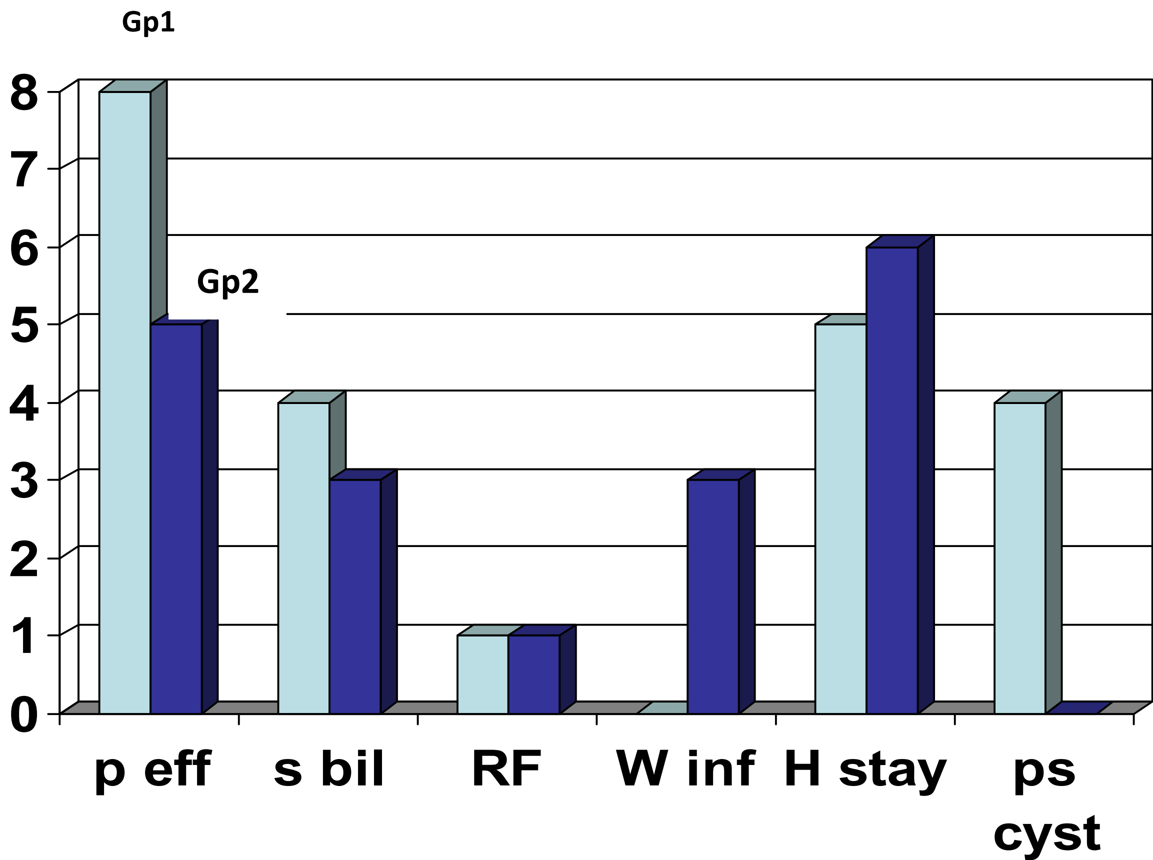
fat necrosis around pancrease

Table: 1

39(male:30 female :9)	Total patient
22-82	Age range (year)
46 ± 2.8	Mean age (year)

Table : 2
Complication of a cute pancreatitis

Explored patient Group 2(19Pt)	Conservatively treated patient Group 1(20Pt)	Type of complications
5 (26%)	8 (40%	1. Bilateral pleural effusion
3 (15%)	4 (20%)	2. Elevated serum bilirubin
1(0.5%)	1(0.5%)	3. Renal failure s-creatinine 2-3-6mg
3 (15%)	----	4.Wound infection
6 days	5 days	5.Hospital stay (Duration of admission)
Nil	4 (20%)	6.Pseudocyst of pancreas



p eff = pleural effusion
s bil = serum bilirubin
Rf= renal failure
W inf= wound infection
H stay= hospital stay
pss cyst= pseudo cyst

Table : 3
Proposed cause of a cute pancreatitis

2 (children) [5%] one live and the other is died[excluded].	Blunt trauma to the abdomen and back .
4 patient [10 %]	Biliary stone
33 patient[85%]	Non-specific causes (idiopathic)
1	Alcohol abuse

REFERENCES

1- J Hepatobiliary Pancreat Surg. 2006 February; 13(1): 10–24.
2- association of upper GI surgeon of great Britain[2005] uk guidelines for management of acute pacreatitis gut 54 ; bailey and loves short practice of surgery p; 1139
3- Maingots abdominal operations 11 edition p.985/987
4- zollenger s atlas of surgical operations 8 edition p.2344
5- last anatomy regional and applied . p. 260.
6- The American Journal of Gastroenterology (2003) 98, 568–577; doi:10.1111/j.1572-0241.2003.07310.x
7- Ranson jhc;acute pancreatitis the pancrease biology pathophsiology and disease 2nd ed; new York press 1993 p637
8- Moreau JA, Zinsmeister AR, Melton L, III, DiMagno EP. Gallstone pancreatitis and the effect of cholecystectomy: a population-based cohort study. *Mayo Clin Proc.* 1988;63:466–73.

مقارنة بين العلاج التحفظي وبين فتح البطن في التهاب البنكرياس الحاد

د. علي نايف عاصي*، د. فاضل غضبان السعيدي**، د. مسلم قنديل كاظم

الخلاصة

دراسة أجريت على ٣٩ مريضا خلال سنتين ٢٠٠٩ و ٢٠١٠ في طوارئ مستشفى الحسين التعليمي في الناصرية كحاله بطن حاد أثبتت فيما بعد التهاب البنكرياس الحاد تحدث حالات التهاب البنكرياس الحاد لأسباب متعددة مثل التهاب البنكرياس بسبب وجود حصى القناة الصفراويه او نتيجة الاصابه بالتهاب فيروس أو بكتيري كما تحدث الالتهابات في البنكرياس بعد التعرض للحوادث والإصابات المباشرة على العمود الفقري او الغير المباشر وقد يحدث التهاب البنكرياس في المرضى بعد عمليات جراحيه كبرى ومرضى الإنعاش الجراحي لأسباب مجهولة تعالج معظم حالات التهاب البنكرياس بعد تشخيصها بالعلاج التخطيطي غير الجراحي باستخدام المغذيات غن طريق الوريد وإعطاء المضادات الحيوية لمنع تحول الالتهاب الى موت في جزء من البنكرياس وتحوله الى خراج خاصة ذيل البنكرياس ١٩ مريضا راجع ردهة الطوارئ يشكو من الم البطن الحاد وقسم من المرضى يراجعون ولديهم تقارير فحص السونار التي يذكر فيه سوائل داخل التجويف البطني مما يؤدي يزيد الشكوك باحتمال وجود ثقب في المعده او الاثني عشر او الأمعاء الدقيقه الاخرى مما تتطلب اجراء عملية فتح البطن استكشافيه وفي اثناء العمليه اكتشف بانها التهاب البنكرياس الحاد ٢٠ مريضا راجع ردهة الطوارئ وتم اكتشاف التهاب البنكرياس من خلال مايلي :

١. وجود احتقان وتورم حول البنكرياس وفي البنكرياس تغير في ملمس سطح البنكرياس
٢. وجود بقع بيضاء مصفره متعدده في مساريق الامعاء والثرب وهي من اهم العلامات الداله على تسرب الانزيمات البنكرياس للتجويف البطني وعمل هذه الانزيمات على تحلل الدهون في مساريق الامعاء
٣. في قسم من المرضى وجد تجمع سوائل نزفيه داخل التجويف البطني وهذه احد حالات التهاب البنكرياس النزفي .

معظم الحالات التي اجريت لها العمليات الجراحيه تماثلوا الى الشفاء وبمضاعفات اقل وفترة بقاء اقل في المستشفى من اولاءك الذين تم علاجهم بدون عمليه حيث تطلب بقاءهم فتره اطول واجراء فحوصات متقدمه مثل المفراس واعادة فحص السونار واشعة البطن لاثبات حالتهم المرضيه وبعد الاستطلاع على الدراسات المماثله والمذكوره في نهاية البحث بانه اجريت حالات سحب السوائل المتجمعه في البطن لتقليل كمية انزيمات البنكرياس في السوائل الموجود في التجويف البطني ونتائجها غير مثبته لحد الان كما ان اجراء عملية فتح البطن وتوقيت هذه العمليه في حالات الاتهاب البنكرياس يبقى موضوع تحدده الظروف السريريه وتطورات المرض وقرار الطبيب المعالج ووصف ما يراه مناسب .

لذا فاننا ننصح لعلاج حالات التهاب البنكرياس الحاد (بعمليه تنظيف التجويف البطني من السوائل البنكرياسيه الناجمه من المرض) اما بعمليه جراحيه اوناظوريه .

---

* قسم الجراحة ، كلية الطب ، جامعة ذي قار
** دائرة صحة ذي قار