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# Acute Biliary Pancreatitis Diagnosis and Endoscopic Treatment Experience of our Department

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## Abstract

**Introduction:** Bile stone is the main cause of acute pancreatitis (AP) and one of the few etiologies that can benefit from specific and curative treatment. The purpose of our work is to evaluate our experience of endoscopic treatment of acute biliary pancreatitis.

**Materials and method:** Retrospective study performed in the hepatogastroenterology "C" department of Ibn Sina hospital in Rabat, we included patients who had acute biliary pancreatitis and endoscopically treated.

**Results:** We included 42 patients, the women/man sex ratio=3.2, the mean age was 51.5 years. A history of acute pancreatitis (AP) was reported in 8 cases and cholecystectomy in 15 cases. Arguments for retaining biliary origin were cytolysis greater than 3 times normal in 18 cases, presence of retentional jaundice in 4 cases, cholangitis in 3 patients, primary biliary stone on ultrasound in 8 cases and choledochal dilatation without obstacle image in 15 cases. Bili-MRI was performed in 6 patients with confirmation of biliary origin in 2 patients. The degree of severity of AP was Balthazar stage A in 14 cases, stage B in 7 cases, stage C in 4 cases and E in 6 cases. In 7 cases severity was not specified. Endoscopic retrograde cholangiopancreatography (ERCP) showed a stone image in 17 cases, dilatation of the bile duct in 31 cases. Stone extraction was successful in 38 patients. Sphincterotomy was performed in 34 cases, of which 4 cases benefited from placement of pancreatic or biliary prosthesis. Immediate complications are marked by a minor bleeding stopped spontaneously. In patients with gallbladders in place, a cholecystectomy was scheduled in the subsequent ERCP.

**Conclusion:** The endoscopic treatment of acute biliary pancreatitis in our experience, proved its efficacy without added morbidity.

**Keywords:** Endoscopic retrograde cholangio pancreatography (ERCP); Biliary stone; Acute pancreatitis

## Introduction

Acute pancreatitis (AP) is a major aggression of the pancreas, the mechanism of this necrosis is an autodigestion of the gland by its own very powerful enzymes. He biliary stone is responsible for about 40 to 60% of cases of PA; in 80% of cases the evolution of acute biliary pancreatitis is favorable. Endoscopic biliary sphincterotomy is an alternative to surgery, with few complications and mortality. Acute pancreatitis represents numerous unique challenges to the practicing digestive disease specialist. Clinical presentations of acute pancreatitis vary from trivial pain to severe acute illness with a significant risk of death. Urgent endoscopic treatment of acute pancreatitis is considered when there is causal evidence of biliary pancreatitis [1]. This article focuses on the diagnosis and endoscopic treatment of acute biliary pancreatitis.

## Materials and Method

A retrospective study in the department of Medicine C of IBN SINA Rabat hospital over a period of 08 years interesting patients with acute pancreatitis of biliary origin and benefited from endoscopic retrograde cholangiopancreatography. The interest of this work is to evaluate the contribution of retrograde catheterization of the bile ducts in the initial therapeutic management of acute biliary pancreatitis. The quantitative variables were expressed as mean and standard deviations, the qualitative variables in numbers and in percentages. A value of $p<0.05$ was considered significant. The analysis was performed by SPSS Software Version 15.0 (SPSS Inc., Chicago, IL).

## Result

### Epidemiology

Females dominate our series with 32 cases (77%); against 10 male cases (23%). The sex ratio is 3.2. The average age of our patients is 51.5 years with extremes ranging from 16 to 86 years old. Regarding antecedents, 15 patients had a cholecystectomy (36%), 8 patients had an acute pancreatic attack (19%). The history of hepatic colic was raised in 5 cases (12%), a vesicular stone in 2 cases (5%).

### Clinical data

On admission, all patients had abdominal pain, of which 85% was epigastric pain and 15% was right hypochondrial pain, 3 patients (7%) admitted with angiocholitis.

## Biological data

Lipase was greater than 3 times normal in all patients, biological cholestasis was found in 28 patients or 67%, hepatic cytolysis is objectified in 18 patients or 42%. In our study 15% of patients had transient sepsis and 9% had persistent sepsis>48 h.

## Radiological Data

Abdominal ultrasonography showed an increased pancreas with peripancreatic infiltration in 16 cases (38%), necrosis flows in 6 cases (14%), a gallbladder stone in 8 patients (19%), the bile duct was dilated in 17 cas (36%) with presence of a stone in 13 cases (30%), choledochal stenosis in 3 patients (7%), and a patient with a cystic stone (2%).

The abdominal CT scan (Figure 1) was performed in all patients showing increased pancreas volume in 16 cases (38%), necrosis flows in 6 cases (14%), with presence of stone in 13 patients (31%).

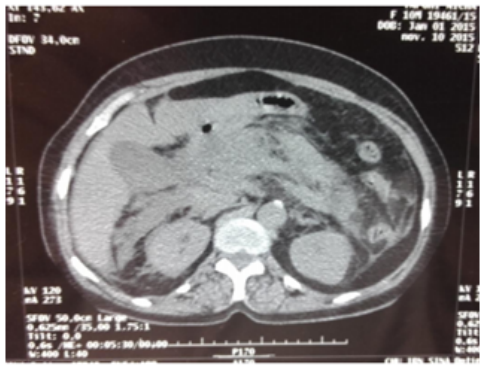

**Figure 1:** Acute pancreatitis necrotizing Balthazar stage E.

The morphological score of Balthazar was calculated and allowed the distribution of our patients as follows (Figure 2).

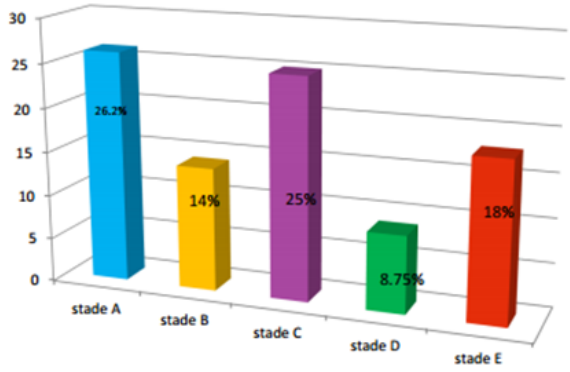


**Figure 2:** Grade distribution of acute pancreatitis according to Balthazar classification.

Magnetic resonance imaging (MRI) of the bile ducts was performed in 7 patients showing dilatation of the bile duct with visualization of low bile stone in 3 cases, a cystic stone in 01 cases. Endoscopic retrograde cholangiopancreatography (ERCP) was performed in all our patients but catheterization of the bile duct was obtained only in 38 cases (90%), the other 4 cases have failure by the presence of a fibrous odditis (2 cases) and a parapapillary diverticulum (2 cases). The opacification showed a dilated bile duct with stenosis of the lower common bile duct in 15 cases, and a low bile duct stone in 11 cases (Figure 3), Biliary tract with several stones in 8 cases, and without obstacle highlighted in 4 cases.

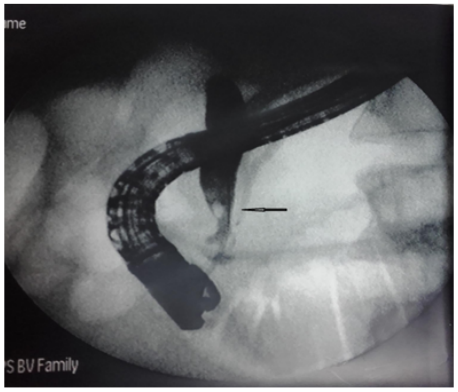

**Figure 3:** Endoscopic retrograde cholangiopancreatography showing a biliary stone in a patient with acute pancreatitis.

## Treatment

Various therapeutic gestures were performed during the endoscopic cholangiopancreatography; an endoscopic biliary sphincterotomy was performed in 38 patients (90%). With extraction of stones with the handle in 24 cases (63%), spontaneous issue of small stones in 2 cases, (5%) and failure of extraction of stones in 2 cases. the placing of a plastic prosthesis in 4 patients is 9.5%.

## Evolution and Complications

The evolution of acute pancreatitis under medical treatment and after ERCP was favorable in the majority of cases, except 2 cases of early bleeding during sphincterotomy that have been adjusted by endoscopic hemostasis.

After sphincterotomy, healing was obtained in 34 patients (80%), a recurrence was noted in 3 patients (9.5%), (a necrosis infection was in one patient and the appearance of a false cyst in 2 cases).

## Discussion

The biliary origin of acute pancreatitis is found in 45 to 60% of cases [1,2]. The passage of stones through the papilla is responsible for pancreatitis of generally moderate intensity and spontaneously favorable evolution [3,4], while the isolation of a stone in the bile duct or the rupture of the pancreatic duct are at the origin of the most severe forms [5,6]. In the majority of cases, the evolution of acute pancreatitis of biliary origin is favorable without sequelae, whereas 15 to 20% are severe forms giving local complications (necrosis, pseudocysts, abscesses) and systemic complications (respiratory distress, kidney failure, septic shock) often requiring intensive care. In our work pancreatitis was severe in 14% of cases with pancreatic necrosis. The proportion of women was greater during Acute Biliary

Pancreatitis in some studies, including that of Millat et al. [7,8], in our series there is a slight female predominance. The confirmation of the diagnosis is based on elevation of lipase>3N according to the definition of the 2001 consensus conference, elevation of ALAT or ASAT beyond 10 times normal had a predictive value of biliary origin of PA [8]. Blood levels of cholestasis and bilirubin enzymes in patients with acute biliary pancreatitis were elevated compared with those with non-biliary acute pancreatitis. In our series lipase was greater than 3 times normal in all our patients, the biological cholestasis was found in 28 patients or 67%, hepatic cytolysis is objectified in 18 patients or 42%. The sensitivity and specificity of the ultrasound performed during the first 72 hours of hospitalization were 69% and 80% for the diagnosis of stones of the gallbladder; on the other hand, his sensitivity in the diagnosis of a bile duct stone was low, not exceeding 45% [9]. In our series, ultrasound showed dilatation of the bile duct in 36% of cases and found a stone gallbladder in 19%. The sensitivity and specificity of abdominal CT scan for the diagnosis of biliary stone during acute pancreatitis was 53% and 57% in the literature [10,11]. While they were 65% and 69% for the diagnosis of gallbladder stone [12]. In our series abdominal CT scan showed biliary stone in 13 patients. MRI magnetic resonance imaging is a non-invasive method. Its sensitivity is greater than 90% for diagnosis of bile duct stones greater than 6 mm in diameter, but drops to 55% for stones less than 6 mm. MRI was performed in 6 of our patients, confirming the diagnostic. Endoscopic cholangiopancreatography (ERCP) and endoscopic sphincterotomy for the diagnosis and treatment of biliary stone are considered an alternative to surgery because of lower morbidity and mortality in elderly patients and high operative risk [13]. The presence of signs of biliary obstruction or cholangitis requires urgent biliary disobstruction regardless of the severity of acute pancreatitis. This therapeutic attitude has been adopted by the various teams [14,15]. In our series, 26 patients showed signs of biliary obstruction, the evolution after SE was favorable in 23 cases, 88% of success. In the case of acute biliary pancreatitis of moderate severity and rapidly favorable evolution, 3 out of 4 studies did not show any interest in the emergency practice of ERCP or endoscopic sphincterotomy, unless signs of biliary obstruction appear secondarily. In our series 15 patients presented with non-severe pancreatitis benefited from a preventive sphincterotomy. In summary, early ERCP has no indication in benign acute biliary pancreatitis and severe acute biliary pancreatitis without angiocholitis. However, it is indicated in cases of acute biliary pancreatitis associated with biliary obstruction and in cases of acute biliary pancreatitis associated with cholangitis. Cholecystectomy should be performed as soon as acute biliary pancreatitis is resolved and to prevent recurrence of pancreatitis acute.

## Conclusion

In our study the endoscopic treatment was effective with less complication, and more success, but despite this the use of surgery is sometimes mandatory especially in front of the big stone of the bile duct.

## References

1. Neoptolemos JP, Davison BR, Winder AF, Vallance D (1988) Role of duodenal bile crystalanalysis in the investigation of "idiopathic" pancreatitis. BrJ Surg 79: 450-453.
2. Lee SP, Nicholls JF, Park HZ (1992) Biliarysludge as a cause of acute pancreatitis. N Engl J M 326: 589-593.
3. Frey CF (1981) Gallstonepancreatitis. Surg Clin North Am 61: 923-938.
4. Acosta JM, Rubio GOM, Rossi R, Chinellato AV, Pellegrini CA (1997) Effect of duration of ampullary gallstone obstruction on severity of lesions ofacute pancreatitis. J Am CollSurg 84: 499-505.
5. Kozarek RA (1998) Endoscopictherapy of complete and partial pancreaticductdisruptions. GastrointestEndosc Clin North Am 3: 39-53.
6. Neoptolemos JP, London NJM, Carr-Locke DL (1993). Assessement of main pancreatic ductintegrity by endoscopic retrograde pancreatography inpatients with acute pancreatitis. Br J Surg 80: 94-99.
7. Blamey SL, Osborne DH, Gilmour WH, O'Neill J, Carter DC, ImrieCW. The early identification of patients with gallstone associated pancreatitis using clinical and biochemical factors only. Ann Surg 1983; 198: 574-578.
8. Millat B, Fingerhut A, Gayral F, Zazzo JF, Brivet F (1992) Predictability of clinico biochemicals coring systems for early identification of severe gallstone associated pancreatitis. Am J Surg 164: 32-38.
9. Jeffrey RB (1989) Sonography in acute pancreatitis. Radiol Clin North Am 27: 5-17.
10. Baron TH, Morgan DE (1999) Acute necrotizing pancreatitis. N Engl J Med 340: 1412-1417.
11. Sugiyama M, Wada N, Atomi Y, Kuroda A, Muto T (1995) Diagnosis of acutepancreatitis: value of endoscopic sonography. Am J Roentgenol 165: 867-872.
12. Wang SS, Lin XZ, Tsai YT, Lee SD, Pan HB, et al. (1988) Clinical significance of ultrasonography, computedtomography, and biochemical tests in the rapid diagnosis of gallstone-related pancreatitis: a prospective study. Pancreas 3: 153-158.
13. Larvin M, McMahon MJ (1989) APACHE-II score for assessment and monitoring of acute pancreatitis Lancet 2: 201-205.
14. Sheikh AM, Warshafsky S, Wolf DC, Lebovics E (2000) Role or early ERCP and sphincterotomy in the management of acute pancreatitis. GastrointestEndosc 51: AB79.
15. Enns R, Baillie J (1999) Review article: the treatment of acute biliary. Aliment Pharmacol Ther. Nov 13: 1379-1389.