

## Post Ercp Perforation

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**Keywords:** Abdominal pain, perforation, ERCP

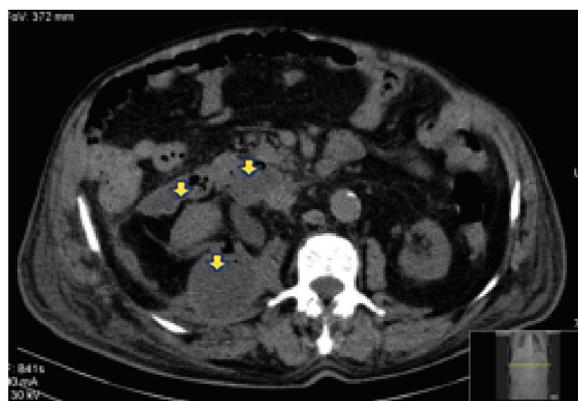
### Introduction

Endoscopic retrograde cholangiopancreatography (ERCP) is a commonly used method in the diagnosis and treatment of biliary and pancreatic duct diseases. Depending on the contrast agent and interventional procedures performed, serious complications such as pancreatitis, bleeding, cholangitis, perforation and sepsis can occur as much as 3-10%<sup>1</sup>. Perforation is one of the most feared complications of endoscopic retrograde cholangiopancreatography. Depending on the degree of perforation, medical treatment may be sufficient or surgical interventions may be required<sup>2</sup>.

### Case

A 90-year-old male patient was admitted to the emergency department with dyspnea. According to the anamnesis obtained from the patient, the patient's shortness of breath was long-lasting, but he had complaints of new onset abdominal pain. He had chronic obstructive pulmonary disease, coronary artery disease, and chronic renal failure. When the patient's anamnesis was deepened, it was learned that he underwent ERCP for choledocholithiasis 10 days ago. The vital parameters of the patient were 36.2°C, pulse 75 / min, TA: 113/6 mmHg, respiratory rate 20 / min, sPO: 99%. In the physical examination, the patient had severe pain in the right upper quadrant of the abdomen. Other system examination findings were normal. In the patient's hemogram, WBC:  $20,7 \times 10^9 / L$  and creatinine were 2.35 mg / dL, but other biochemical parameters were normal. The CRP of the patient was 15.8 mg / dL (normal range 0.35). Abdominal ultrasonography was requested in accordance with physical examination and laboratory values. The patient's abdominal

ultrasonography revealed that the gall bladder was of normal size, wall thickness and echo were normal, and a large number of Stone echoes and common bile duct dilated (7 mm). Then the patient with CRF was asked for non-contrast abdominal CT. Non-contrast abdominal CT revealed suspicious free air densities in the paraduodenal area and was first evaluated in favor of intra-retroperitoneal abscess secondary to duodenum perforation (Figure-1). The patient was referred to the general surgery intensive care unit.



**Figure 1.** Intra-retro peritoneal abscess secondary to duodenum perforation

### Discussion

The diagnosis of duodenal perforation after ERCP is generally based on physical examination findings, fluoroscopic imaging and in some cases by computed tomography imaging<sup>2</sup>. Treatment of these perforations is still controversial<sup>3</sup>. The general principles of treatment include discontinuation of the patient's oral intake, administration of nasogastric cath-

eter and initiation of iv antibiotherapy. Stapfer classification is currently used in the selection of patients to undergo surgery<sup>4</sup>. According to this classification;

Type I: Free bowel wall perforation

Type II: Retroperitoneal duodenal perforation secondary to periampullary injury

Type III: Perforation of the pancreas or bile duct

Type IV: Retroperitoneal air only

Among these, the most common type is II. Among these groups, the most common type 1 and type 2 injuries are surgically treated and conservative treatment methods are preferred in most patients<sup>4-8</sup>. However, it requires careful observation and early surgical consultation, as the result may be poor in patients who are unable to receive fast and appropriate treatment. In addition to the type of injury, the age, concomitant diseases, previous surgery and medical history of the patient are also must considered. The prognosis of patients with perforation depends on the rate of recognition, clinical structure and patient comorbidities<sup>9-11</sup>. Our case was also evaluated as type 2 injury. When the patient's current medical condition, delay in diagnosis and type of injury were taken into consideration, medical treatment decision was made and the patient was taken to intensive care follow-up.

## Conclusion

Perforation should be kept in mind in patients with abdominal pain starting with endoscopy and ERCP. A careful history and physical examination in emergency departments can be diagnosed by direct radiography and computed tomography. Most of the cases diagnosed early can be followed by conservative treatment. Delayed diagnosis and treatment may have adverse consequences such as sepsis and death, so early surgical consultation should be sought.

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