

Indirect biliary drainage as an alternative solution for biloma due to complicated biliary drainage

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Pancreas cancer has increased morbidity and mortality. It generally result in biliary obstruction which life threatening importance. Main biliary drainage method is endoscopic retrograde cholangiopancreatography. When endoscopic retrograde cholangiopancreatography is not successful, second preferred method is percutaneous biliary drainage. Percutaneous biliary drainage has some complications which is an invasive procedure. A complication of percutaneous biliary drainage due to patient iatrogenity which was not ever reported in the literature biliary drainage according to our literature research. In these circumstances an alternative solution is indirect biliary drainage.

Key words: Biliary drainage, pancreas cancer, biloma, complication, percutaneous intervention

Biliyer drenaj komplikasyonu olan bilomanın alternatif bir çözümü: indirekt biliyer drenaj

Pankreas kanseri yüksek mortalite ve morbiditeye sahiptir. Genellikle hayatı tehdit edici öneme sahip olan biliyer obstrüksiyona neden olmaktadır. En önemli biliyer drenaj metodu endoskopik retrograd kolanjiyopankreatografi'dir. Endoskopik retrograd kolanjiyopankreatografi'nin başarılı olamadığı durumlarda tercih edilen yöntem perkütan biliyer drenaj'dır. İnvaziv metod olan perkütan biliyer drenaj birtakım komplikasyonlara neden olabilmektedir. Bizim literatür araştırmalarımıza göre hasta iatrojenitesine bağlı komplikasyon rapor edilmemiştir. Bu gibi durumlarda alternatif bir çözüm indirekt biliyer drenajdır.

Anahtar kelimeler: Biliyer drenaj, pankreas kanseri, biloma, komplikasyon, perkütan girişim

INTRODUCTION

There are many factors in the etiopathogenesis of acute abdominal pain. In patients with external drainage catheter, intraabdominal infections, abscess or catheter malposition are the main etiologic factors for abdominal pain. In this situation, imaging methods are the primary diagnostic tools for the correct diagnosis. In this study, we present a male patient who had external-internal biliary drainage catheter and presented with right upper quadrant pain.

CASE REPORT

An 83-year-old anxious man was admitted to the emergency service with mild right upper quadrant pain. On palpation, mild right upper quadrant tenderness was present, and a 4 mm incision scar was seen on the intercostal area on inspection. His medical history revealed that a 10 Fr biliary drainage catheter (Flexima, Boston Scientific, USA) had been placed approximately one week before due to inoperable pancreas cancer. The external catheter tip was not visible at the incision site. On

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Manuscript received: 25.05.2010 **Accepted:** 17.08.2010

Turk J Gastroenterol 2012; 23 (1): 79-81
 doi: 10.4318/tjg.2012.0445

abdominal radiography, the intraabdominal catheter was seen in the right upper quadrant, and the internal catheter tip had lost its normal pigtail formation. Abdominal multi-slice computed tomography (CT) revealed that the catheter had moved to the perihepatic junction, and fluid collection was seen in the perihepatic region, which showed an air–fluid level. The biliary tree was mildly dilated and it was seen to contain air (Figures 1-3). According to these imaging findings, the patient was queried regarding the position of the catheter. It was learned that he had cut the external catheter tip. An operation was planned to retrieve the catheter but the patient declined the surgery. Four days later, he was re-admitted to the emergency department with progressive pain in the right upper quadrant and dyspnea. Informed consent was taken from his son because the patient was unconscious. An external drainage catheter was placed in the biliary collection (Figure 4), and indirect biliary drainage was restored without surgery. After the catheter placement, his complaints were reduced and the biliary collection totally disappeared. However, two days later, dyspnea increased progressively. CT angiography of the pulmonary artery was performed, and bilateral pulmonary emboli were seen. Anticoagulant drugs were started but the patient died four days later.



Figure 1. CT scanogram shows external catheter tip cut and lost pigtail formation of internal tip.

DISCUSSION

A number of interventional options exist for the palliation of symptomatic malignant biliary obstruction, including surgery or a minimally invasive approach (percutaneous or endoscopic) with plastic or metal stents (1).

Since their development in the late 1980s, endoscopic retrograde cholangiopancreatography (ERCP) and subsequently transendoscopic biliary drainage have diminished the need for transhepatic cholangiography (THC) and percutaneous biliary drainage (PBD). Percutaneous therapy continues to have a role in patients with anatomical variations, inflammatory processes, adenomas of the papilla, or a very short common duct and very steep approach of the bile duct to the duodenal wall anatomy (2,3). In the reported case, percutaneous transhepatic biliary drainage (PTBD) was performed, after unsuccessful ERCP. PTBD is an invasive technique, and it has potential complications, such as bleeding, cholangitis, biliary leak, duodenal perforation, and even death. In previous series, procedure-related death ranging from 0.6% to 5.6% was reported. Weber *et al.* (3) reported that 39/419 patients (9.31%) had procedure-related complications including bleeding (2.86%), acute cholangitis (1.67%), sepsis (1.43%), acute pancreatitis (0.48%), biloma (0.48%), intrahepatic hematoma (0.48%), biliovenous fistula (0.48%), bilioleural fistula (0.48%), pneumothorax

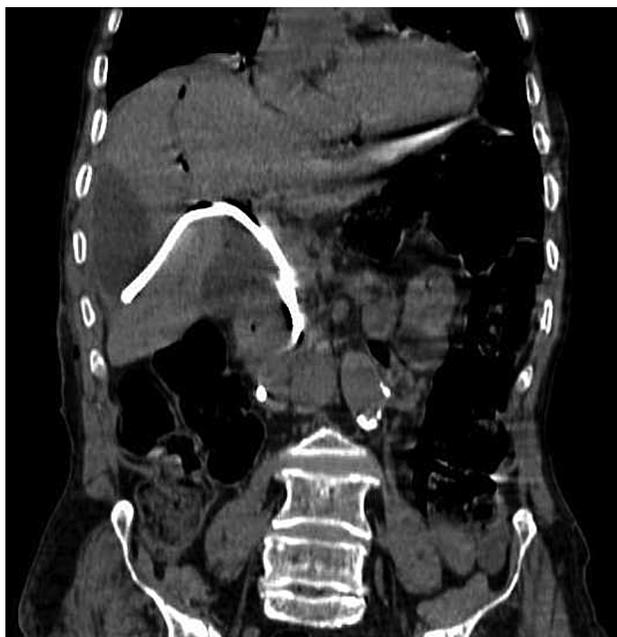


Figure 2. Unenhanced oblique reformatted CT image shows perihepatic collection and air in the biliary tree.



Figure 3. Unenhanced axial CT image show perihepatic collection and air in the biliary tree.



Figure 4. Post-contrast CT axial image shows a second catheter in the biliary perihepatic collection; the collection is almost drained and there is no air in the biliary tree.

(0.24%), peritonitis (0.24%), and perforation (0.24%). In this reported case, the cause of biliary collection was not the biliary procedure but most likely the result of the patient's own intervention.

In conclusion, all percutaneous interventions carry the potential risk of complication. However, complication due to patient iatrogenicity is extre-

mely rare. Indirect biliary drainage is an effective method for treating perihepatic biliary collection, and should be considered before surgery. To avoid these complications, all interventional radiologists should evaluate patients carefully to determine whether PTBD or biliary stenting is preferable based on the patient's disposition.

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