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CASE REPORT

A rare complication of endoscopic retrograde cholangiopancreatography: Hepatic subcapsular hematom

Endoskopik retrograd kolanjiopankreatografinin nadir bir komplikasyonu: Hepatik subkapsüler hematom

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ABSTRACT • Hepatic subcapsular hematoma is a rare complication with high mortality after endoscopic retrograd cholangiopancreatography. Early diagnosis and proper treatment are important. In patients with sudden abdominal pain, hypotension, and tachycardia, hepatic subcapsular hematoma must be in differential diagnosis. Here, we present a rare case of hepatic subcapsular hematoma after ERCP who were treated conservatively with a complete resolution after eight months.

Key words: Hepatic subcapsular hematoma, ERCP, complication

ÖZET • Hepatik subkapsüler hematom, endoskopik retrograd kolanjiopankreatografinin nadir görülen ve mortalitesi yüksek bir komplikasyonudur. Erken tanı ve uygun tedavisi önemlidir. Endoskopik retrograd kolanjiopankreatografi sonrası hipotansiyon, taşikardi ve ani başlayan karın ağrısı gelişen hastalarda hepatik subkapsüler hematom düşünülmelidir. Burada endoskopik retrograd kolanjiopankreatografi sonrası hepatik subkapsüler hematom gelişen ve konservatif tedavi edilen ve sekiz ay sonra hematomu tamamen kaybolan bir olguyu sunuyoruz.

Anahtar kelimeler: Hepatik subkapsüler hematom, ERCP, komplikasyon

INTRODUCTION

Currently, endoscopic retrograde cholangiography (ERCP) is the most used treatment modality in the treatment of many benign biliary diseases, especially choledocholithiasis. This procedure has many complications. ERCP-associated liver subcapsular hematoma is a very rare and life-threatening complication (1-3). Hepatic subcapsular hematoma is accumulation of blood between Glisson's capsule and the liver parenchyma. Here, we present a case who underwent ERCP due to choledocholithiasis, developed a large subcapsular hematoma of the liver and improved in long-term follow-up with conservative treatment.

CASE REPORT

Sixty five years-old female patient underwent ERCP due to choledocholithiasis. On ERCP, choledochus was catheterized using 0.35 mm guidewire and choledochus and intrahepatic biliary branches were dilated, there were a few stone images in distal choledochus with a diameter of 7 - 8 mm. Endoscopic sphincterotomy was applied, there was a little bleeding which was stopped by balloon tamponade. Ballon extraction applied and one stone were retrieved, other stones were not able to be extracted. Since biliary stones were not able to be extracted 10F 10 cm biliary stent were placed. Six hours after the procedure patient defined ab-

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dominal pain, minimal respiratory distress, palpitation, and paleness. The patient was taken to intensive care unit. On follow up, normal hemoglobin levels on admission dropped. There was no melena or hematemesis. Computed tomography (CT) revealed hypodense areas consistent with hematoma in right lobe of liver extending form segment 6 to dome reaching seven centimeters in widest axis, and in left lobe extending to segment three along the surface of liver reaching five centimeters in widest axis (Figure 1). There was pericholecystic free fluid and stent image in choledochus. There was also free fluid in perihepatic, and perisplenic areas and among intestinal loops. Besides, in posterobasal segments of both hemithorax, there was pleural effusion. The patient's oral intake was stopped and given antibiotics to prevent secondary infection. A total of five units of erythrocyte suspension was transfused. She was stable after blood transfusion. She was consulted with interventional radiology and general surgery, but no intervention required except for follow up. One-week later

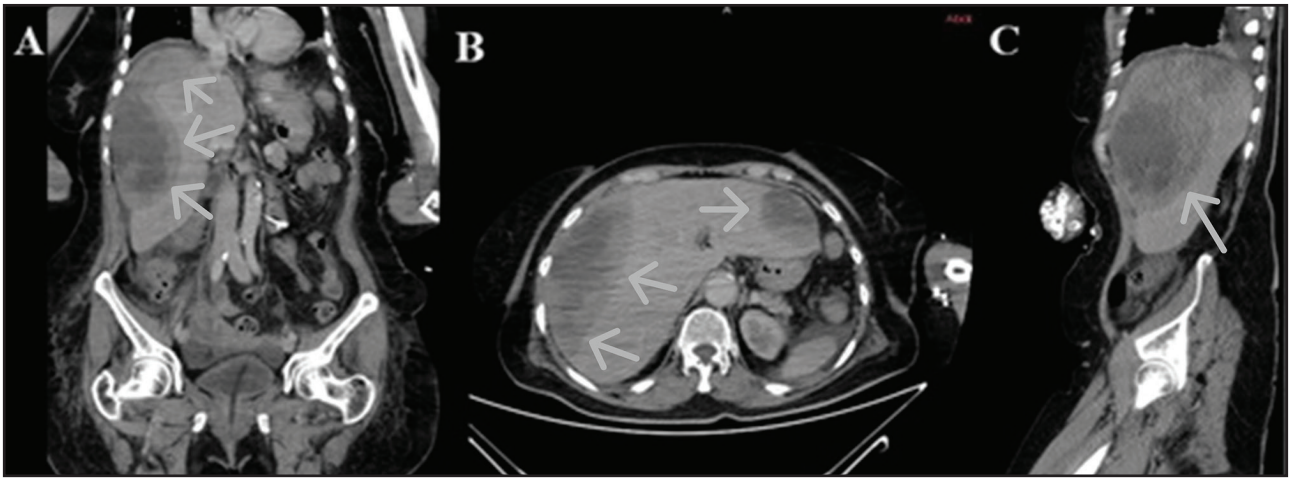

Figure 1 Cross sectional images of subcapsular hematoma on computed tomography (Arrows) (**A.** Coronal, **B.** Transvers, **C.** Sagital).

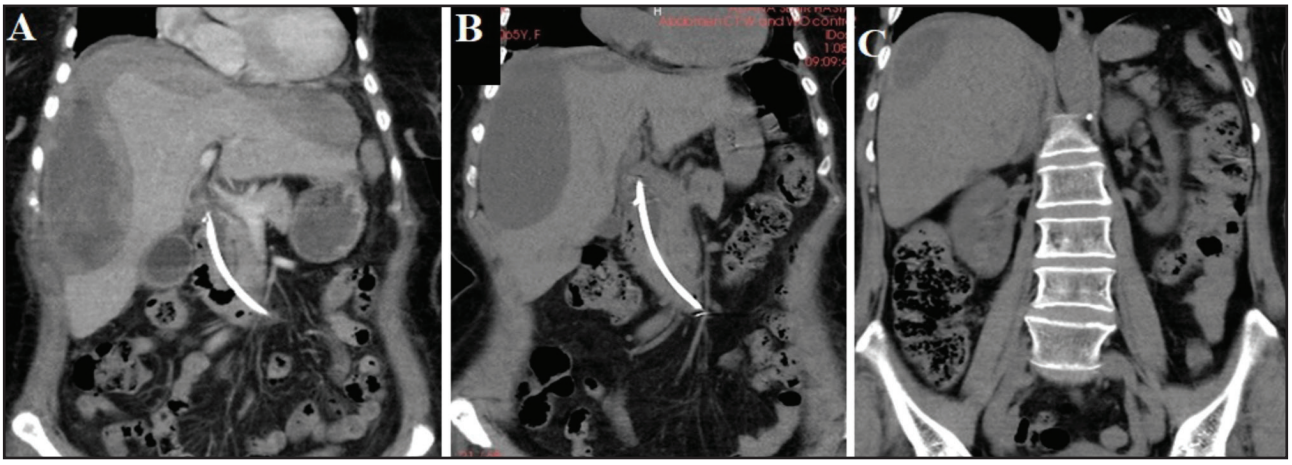

Figure 2 Transvers section of subcapsular hematoma after one week **(A)**, 40 days **(B)**, and five months later **(C)**.

control CT was performed. Pleural effusion was regressed. There were fluid loculations consistent with hematoma in right lobe with a diameter of 15 x 6 cm and 13 x 5 cm in left of the liver (Figure 2A). She was followed-up in intensive care unit for seven days and seven days in inpatient department. She was discharged at 15th day. Follow-up was made using CT for six months and then with ultrasonography. 40 days after the ERCP procedure, CT revealed hypodense hematoma areas containing some hyperdense areas continuing with each other at its' widest point in coronal section with a size of 7 x 13 cm and 22 x 65 mm in right and left liver lobes (Figure 2B). Five months later, hematoma area was 49 x 34 mm, hypodense cystic nodular lesion with thin wall (Figure 2C) on CT. Seven months later, the lesion was stable on ultrasonography with a size of 4 x 3 cm as heterogenous solid lesion in right lobe of liver. After eight months the lesion was completely healed with no observable lesion in ultrasonography. The patient has given written permission for this article.

DISCUSSION

The underlying etiology of hepatic subcapsular hematomas is still completely unknown, there are two hypotheses. The first hypothesis is that while extracting biliary stones with a stone extraction balloon, traction force of the extractor balloon leads to liver damage resulting in rupture of the biliary vessels and branches and ultimately bleeding. The second hypothesis suggests that direct injury of guidewire which leads to hepatic damage as a rupture of small intrahepatic vessels and bleeding subcapsular area in liver. The latter was reported more commonly in the literature (4-6). We think that direct injury of guidewire was responsible for our patient. It is thought that liver subcapsular hematoma is preventable by close monitoring of the guidewire and applying low force during balloon extraction (6).

In patients with hypotension, tachycardia, and sudden abdominal pain after ERCP, subcapsular hematoma must be considered and diagnosed using imaging methods (3). If it is not diagnosed early and treated properly, mortality is high (2). In our patient, there was bleeding during ERCP, which was controlled with balloon tamponade, so we thought sphincterotomy associated bleeding at first. Since there were no signs of gastrointestinal bleeding such as melena, hematochezia, or hematemesis, and she had abdominal pain, we obtained CT and CT revealed subcapsular hematoma.

Conservative management is the most common treatment in the treatment of hepatic subcapsular hepatoma after ERCP and is appropriate hemodynamically stable patients with no signs of super infection or abscess formation. In hemodynamically unstable patients, surgical treatment, percutaneous hematoma drainage and embolization treatment may be necessary (3,6). We followed our patient conservatively by stopping oral intake with blood transfusions, analgesics, and antibiotics. Since our patient was stable after blood transfusion during follow up period, she did not require any other interventions such as surgical or interventional radiologic intervention. We observed complete resolution of subcapsular hematoma at eight months.

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