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Case Report

Biliary Drainage Impairment After Liver Transplantation As a Result of Adhesive Small-Bowel Obstruction

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Abstract

With the improvements of surgical techniques, favorable results in orthotopic liver transplantation surgeries have increased in recent years. Biliary complications are common after liver transplantation. We aimed to discuss a case that developed adhesive small bowel obstruction -related jaundice after liver transplantation and underwent adhesiolysis by surgery in the light of the literature.

The patient, who underwent right lobe liver transplantation with a living donor 7 years ago due to chronic liver damage by hepatitis B, was examined with sudden onset of abdominal pain and jaundice. It was determined that the current situation was connected to the postoperative adhesion and that the adhesion disrupted the biliary drainage and then surgical intervention was performed. It should always be kept in mind that the increase of serum bilirubin levels in patients with liver transplantation may also be caused by any mechanical obstruction in the roux leg of Roux-en Y hepaticojejunostomy.

Keywords: Liver transplantation, post-transplant complications, postoperative adhesion biliary complication

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Liver transplantation continues to be the standard treatment for patients with end-stage liver disease. With the improvements of surgical techniques, favorable results in orthotopic liver transplantation surgeries have increased in recent years. As with all intraabdominal procedures, there is a risk of intraabdominal adhesion in liver transplant patients. Small bowel obstructions are a common morbidity associated with abdominal surgery.[1] Also, biliary complications are a common cause of morbidity following liver transplantation, and approximately 15-20% of all allograft recipients develop a biliary complication within 2 years.[2] Treatment modalities include both operative and nonoperative management.[3] Conservative, nonoperative treatment typically consists of bowel rest, intravenous fluid rehydration, and nasogastric intubation.[3] While most small bowel obstructions resolve without surgical intervention, about 25% require immediate surgical intervention.[3] In biliary complications, 69.3% of liver transplant recipients undergo reconstruction with a biliary-enteric anastomosis, while the management of an anastomotic stenosis is typically based on percutaneous or surgical revision.[2]

In this case, we aimed to present a living donor liver transplant patient with increased serum bilirubin levels due to impaired biliary flow.

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Case Report

A 52-year-old patient, who had an orthotopic liver transplantation with living donor 7 years ago due to chronic liver damage by hepatitis B, presented with jaundice for 2 days and sudden onset of abdominal pain. The donor was the 30-year-old son of the patient and had the same blood type. The graft weight of the donated right lobe was 520 g. There were no symptoms of ileus such as nausea, vomiting, distension, and gas-stool discharge. Laboratory tests at patient admission AST: 278.3 u / L, ALT: 239.7 u / L, ALP: 121 u / L GGT: 400u / L T.Bil: 3.95 mg / dL, D.Bil: 3, 49 mg / dL. White blood cell count was within normal range. Dilatation was observed in intrahepatic bile ducts at Usg. Oral feeding was stopped and intravenous fluids were given for hydration. The next day, control T.Bil: 9.05 mg / dL, D.Bil: 8.29 mg / dL. Meanwhile, insertion of a percutaneous biliary drainage catheter was planned. MR (Magnetic resonans) and CT (Computed tomography) showed dilatation in the proximal jejunal segments, dilation filled with fluid content, and valvula conniventest (Fig. 1). Since other small intestine segments were normal, the patient was considered for adhesion at this level and underwent emergency surgery.

In laparotomy, it was observed that the patient had a roux-en Y choledokojejunostomy and an obstruction in the roux leg due to small bowel adhesion (Fig. 2). It was observed that a band disrupted the intestinal passage and circulation. It was observed that intestinal segments close to adhesion were dilated and ischemic. It was determined that this adhesion prevented the flow of bile. Warm isotonic solution was applied to the intestinal sections after adhesiolysis. The operation was terminated when it was observed that he had intestinal peristalsis and the color and circulation in the intestine returned to normal. The patient recovered completely and was discharged five days after the operation.

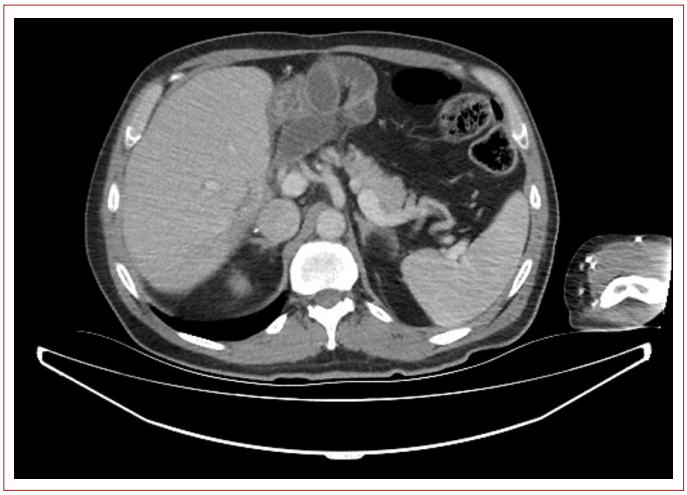

Figure 1. Adhesion appearance on Computed tomography.

Discussion

Complaints such as fever, diarrhea, abdominal pain, and jaundice are common in liver transplant patients and may lead to admission to the emergency room and subsequent hospitalization. However, the underlying cause may be related to a complex condition or to the side effect of immunosuppressive therapy.[3] Biliary complications are another common cause of morbidity following liver transplantation.[2] The two most common biliary complications after living donor liver transplantation are biliary leakage and biliary anastomotic stricture. Early treatment with endoscopic and interventional radiological approaches can provide satisfactory results in biliary complications. If treatment fails with these approaches, the next option would be surgical revision, which is rarely performed.[2]

In our case, firstly we thought that the increase in serum bilirubin levels was caused by a stricture in the biliary anastomosis. Therefore, we planned to use a percutaneous biliary drainage catheter. However, in the radiological examinations of the patient, it was understood that the cause of the deterioration of the biliary drainage was not due to the anastomotic stenosis, but to the adhesion in the roux leg. The patient was taken to an emergency operation and adhesiolysis was performed.

Although a long time has passed since the transplant in patients with liver transplantation, care should be taken in terms of complications that may require surgical procedure, it should always be kept in mind and surgery should always be considered as an option. However, we think that such patients should be followed up in experienced centers due to the difficulty of surgical application and the possibility of prolonging the duration of surgery depending on the developing complication.

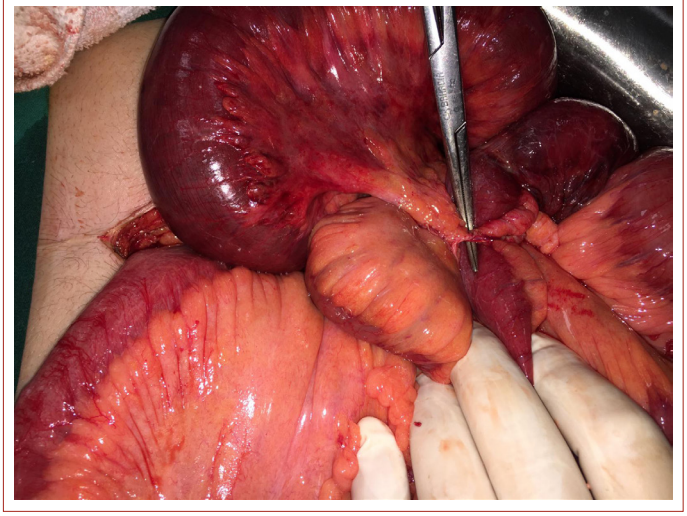

Figure 2. Intraoperative view of adhesion.

In addition to anastomotic stenosis, which is one of the most common complications in patients undergoing liver transplantation, it should always be kept in mind that any mechanical obstruction (post operative adhesion- external compression-gallstones) in the roux leg of Roux-en Y hepaticojejunostomy may also increase serum bilirubin values. Because such reasons require rapid diagnosis and rapid surgical intervention.

Disclosures

Informed consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

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