

Laparoscopic treatment of proximally migrated stent which was unable to be removed endoscopically

Proksimal safra kanalına kaçan, endoskopik olarak çıkarılamayan ve laparoskopik yöntemle çıkarılan stent olgusu

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ABSTRACT

Stent migration is one of the rare complications of biliary stenting. A 65-year-old male patient was admitted with complaints of abdominal pain. In his medical history, he underwent laparoscopic cholecystectomy five years ago. The laboratory results, abdominal ultrasonography, and Magnetic resonance cholangiography revealed choledochal stones and benign biliary stenosis. The patient underwent endoscopic retrograde cholangiopancreatography (ERCP). After two stones were removed from the choledochus, a 10-FR straight stent was inserted into the choledochus. One month later, it was revealed that the stent was not in place in the ERCP. Despite several attempts, the stent was unable to be removed and, thus, a decision for surgery was made. The operation was performed with laparoscopic intervention. Although migrated stents can be removed endoscopically, surgical treatment is required, if they are unable to be removed.

Keywords: Endoscopic retrograde cholangiopancreatography, migrated stent, laparoscopy.

ÖZET

Stent migrasyonu biliyer stent uygulaması işleminin nadir rastlanan komplikasyonları içerisinde yer almaktadır. 65 yaşında erkek hasta, karın ağrısı şikâyeti nedeniyle başvurdu. Özgeçmişinde 5 yıl önce laparoskopik kolesistektomi operasyonu dışında özelliğe rastlanmadı. Laboratuvar incelemelerinde, karin ultrasonografisinde ve magnetik rezonans kolanjiyografi sonucunda koledok taşları ve benign biliyer stenoz tanısı konulmuştur. hastaya endoskopik retrograd kolanjiopankreatografi (ERCP) planlandı. Koledok kanalından 2 adet taş çıkarıldı VE 10 fr straight stent yerleştirildi. Bir ay sonra kontrol kolanjiogramında stentin ana safra kanalı içerisine doğru migrate olduğu saptandı. Endoskopik birçok denemeye karşın stentin çıkartılamaması üzerine cerrahiye karar verildi. Operasyon laparoskopik gerçekleştirildi. Migrate olan stentler endoskopik olarak çıkartılabildiği gibi çıkartılamadığı durumda laparoskopik minimal invaziv tedavi yöntemi olarak akılda tutulmalıdır.

Anahtar kelimeler: Endoskopik retrograd kolanjiopankreatikografi, migrate stent, laparoskopi.

INTRODUCTION

Stent migration is one of the rare complications of biliary stenting (1). Stents often migrate proximally to the bile ducts and distally to the intestinal system. Herein, we tried to explain how to remove migrated stent which was not done by endoscopically.

CASE

A 65-year-old male patient was admitted with complaints of abdominal pain, nausea, and vomiting. In his medical history, he underwent laparoscopic cholecystectomy five years ago. The laboratory results were as follows: aspartate ami-

notransferase: 300 U/L, alanine aminotransferase: 250 U/L, total bilirubin: 6 mg/dL, direct bilirubin: 4 mg/dL, alkaline phosphatase: 450 IU/L, gamma-glutamyl transferase: 200 mg/dL, and Ca 19-9: 340 U/mL.

Abdominal ultrasonography showed normal findings, except for the dilatation of choledochus. Magnetic resonance cholangiography revealed two choledochal stones and blunt ending of choledochus compatible with benign biliary stenosis.

The patient underwent endoscopic retrograde cholangiopancreatography (ERCP). After endoscopic sphincterotomy (EST), two stones were removed from the choledochus using an extraction balloon and extraction basket. On follow-up cholangiography, there was no adequate drainage despite EST; therefore, a 10-FR straight stent (9cm, ADVANIX™, Boston) was inserted into the choledochus. One month later, the patient underwent ERCP for stent retraction and follow-up cholangiogram. It was revealed that the stent was not in place. Post-cannulation cholangiogram revealed that the stent migrated into the right main bile duct (Figure 1). Despite several attempts to remove with the balloon, forceps, snare, and basket, the stent was unable to be removed and, thus, a decision for surgery was made. Operation was started with laparoscopic intervention. The choledochus was visualized by the dissection of the hepatoduodenal ligament. The stent was removed by choledochotomy and the opening was primarily closed with 4/0 prolene (Figure 2).

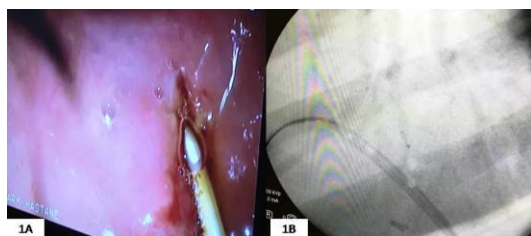


Figure 1: The cholangiogram after selective cannulation (a) showing a proximally migrated stent (b).

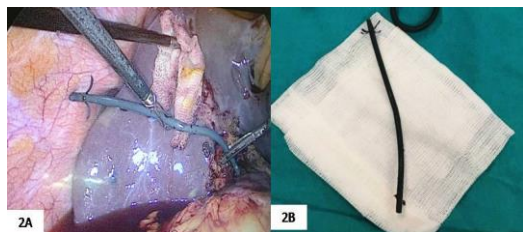


Figure 2: After laparoscopic choledochus exploration (a), the stent (b) was removed by choledochotomy.

DISCUSSION

Stent migration is one of the rare complications of biliary stenting, which is used in both pal-

liative and definitive treatment of biliary obstructions. After biliary stenting, the rate of proximal stent migration is about 3.1 to 4.9% and the rate of distal migration is 3 to 6% (1). Although distal stent migration is more common, they are frequently excreted in the feces without causing any complications. However, distally migrated stents can cause complications in patients with diverticular disease, hernia, and previous abdominal surgeries. Proximal migration of the stent, which is relatively rare, frequently presents with biliary obstruction in the late period. Stent migration has been found to be more common in benign cases than malignant cases, and this phenomenon can be attributed to the fact that the tissue tension around the stent is higher in malignant cases and that the tumor grows into the stent. Stent-specific predisposing factors include the use of multiple stents, and the width, height, and type of the stent, duration of use, and stent fractures. Migration is seen more frequent when the stent is used for more than one month (2). The proximally migrated stents can be removed endoscopically by snares, baskets, Soehendra stent retrievers, forceps, or balloon dilation technique. Although migrated stents can be removed endoscopically, surgical treatment is required, if they are unable to be removed (3). The removal of the stent with laparoscopic choledochus exploration should be kept in mind as a minimally invasive treatment method alternative to conventional surgery.

Informed consent

Written informed consent was obtained from patient who participated in this case.

Conflict of interest

No conflict of interest was declared.

Financial disclosure

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