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Laparoskopik Kolesistektomi Sonrası Gelişen Psödoanevrizmanın Perkütan Ultrason Kılavuzluğunda Trombin İnjeksiyonu ile Başarılı Tedavisi: Olgu Sunumu

Treatment of Laparoscopic Cholecystectomy Induced Pseudoaneurysm with Percutaneous Ultrasonography Guided Thrombin Injection

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Özet

62 yaşında bayan hasta laparoskopik kolesistektomi (LK) sonrası postoperatif 10. günde karın ağrısı gelişmesi üzerine kliniğimize başvurdu. Çekilen BT'de sol rektus kılıfı içerisinde öncelikle hematom lehine yorumlanan ancak vasküler yapı ile ilişkisi net değerlendirilemeyen 9x2 cm boyutunda lezyon izlendi. Dopler incelemede solda rektus kılıfı hematomu lokalizasyonunda inferior epigastrik arterden köken alan psödoanevrizma kesesi ile uyumlu görünüm izlendi. Bu alana US eşliğinde perkütan girilerek trombin enjeksiyonu yapıldı. Kontrol doplerinde kesede vasküler dolum izlenmedi. LK'nin psödoanevrizma ile ilişkili olabileceği ve radyolojik perkütan tedaviler ile başarılı bir şekilde tedavi edilebileceği akılda tutulmalıdır.

Anahtar Kelimeler: inferior epigastrik arter, trombin, rektus hematomu

Abstract

62 years old female patient admitted to our clinic with abdominal pain 10 days after laparoscopic cholecystectomy. In tomography screening 9*2 cm sized lesion that primarily interpreted left rectus sheath hematoma was detected but relationship with vascular structures cannot be identified. At doppler screening pseudoaneurysm sac that originated from inferior epigastric artery was seen in left rectus sheath hematoma localization. Ultrasound-guided percutaneous thrombin injection was performed to this area. At control doppler ultrasonography, vascular filling disappeared. The fact that LK may be associated with pseudoaneurysms must be kept in mind, considering relatively easy radiological management.

Keywords: inferior epigastric artery, thrombin, rectus hematoma.

INTRODUCTION

Although pseudoaneurysms are known complications of percutaneous angiographic procedures, they can also be seen postoperatively (1). Pseudoaneurysms due to cystic and hepatic artery injury can be seen after laparoscopic cholecystectomy (LC) (2). Although pseudoaneurysms were corrected by surgical repair priory, this was abandoned because of high morbidity of these operations. Thrombin, a derivative of prothrombin, assists in the cleavage of fibrinogen to fibrin, thus resulting in thrombus formation. Because of lower morbidity and mortality and better patient comfort, ultrasound-guided thrombin injection (UGTI) is currently the preferred treatment modality for pseudoaneurysms. Although in literature there are cystic and hepatic artery injury induced pseudoaneurysm cases that were treated with thrombin injection (3), pseudoaneurysm case due to inferior epigastric artery injury is not available in the literature. We report a case of an iatrogenic inferior epigastric artery pseudoaneurysm, which was formed secondary to LC and was successfully treated by UGTI.

CASE REPORT

62 years old female patient admitted to our clinic with abdominal pain. Physical examination was normal except tenderness on right upper

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quadrant of abdomen. Laboratory analysis revealed alkaline phosphatase (ALP): 184 U/L, gammaglutamyl transferase (GGT): 222 U/L, aspartate aminotranferase (AST): 39 U/L, alanine *transaminase(ALT)*: 34 U/L, total bilirubin:2.4 U/L, direct bilirubin: 0.7 U/L, white blood cell count (WBC): 8.9 x10^3/Ul, neutrophile: 7.7 x10^3/UL, c-Reaktif protein(CRP): 111 mg/L. In abdominal ultrasonography gallbladder wall thickness was 5.4 mm and diffuse increased and a large number of microlitiazis was present. LC was performed. At postoperative 10th day, abdominal ultrasonography was done because of discomfort and pain in the abdomen and 9 cm sized vascular lesion is detected at the operation site. At doppler screening, pseudoaneurysm sac that originated from inferior epigastric artery is seen in left rectus sheath hematoma localization (Fig. 1).

Figure 1. Pseudoaneurysm is being monitored in the trocar entrance at the central part of hematoma in Doppler screening.

In tomography screening 9*2 cm sized lesion with contrast enhacement at central part that primarily interpreted pseudoaneursym and rectus sheath hematoma is detected. With these findings pseudoaneursym due to inferior epigastrik artery injury is thought and decided to perform thrombin injection. Ultrasound-guided percutaneous sterile fashion bovine thrombin at a concentration of 1000 U/ml in a 1-ml syringe and saline in another 1-ml syringe

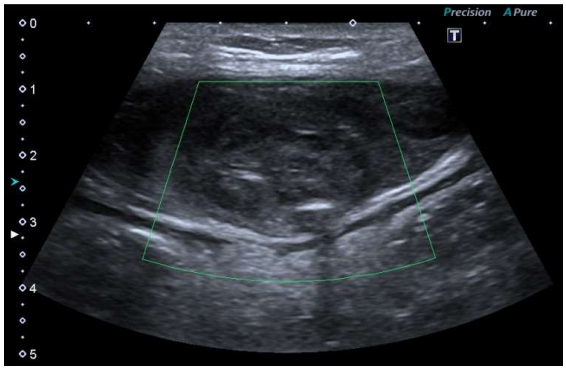

Figure 2. Pseudoaneurysm filling is not observed after thrombin injection at Doppler screening.

trombin injection is performed to this area with a 22-gauge spinal needle. At control doppler screening vascular filling is disappeared in this pseudoaneurysm sac (Fig. 2) After the procedure there was no complications and the patient was discharged with recommendations.

DISCUSSION

Visceral artery pseudoaneurysms are aneurysms that mostly affect the celiac, superior, or inferior mesenteric arteries and their branches (4). These pseudoaneurysms are mostly due to iatrogenic injury from instrumentation or trauma. Iatrogenic pseudoaneurysms can also be seen after LC. These pseudoaneurysms are generally originated from cystic or hepatic arteries. They can be life-threatining because of rupture or hemorrage risc (5) and must be treated immediately.

We present here an unusual originated pseudoaneurysm seen after LC. Major treatments for these psuudoaneursyms are endovascular repair, open surgical repair, ultrasound guided compression (UGC) and UGTI. There are a lot of studies comparing these treatment options. Surgical repair is generally associated with significant morbidity because it often requires laparatomy. Endovascular repair is an effective treatment but it is unachievable in many centers. Although a meta-analysis revealed that UGC is effective and safe as UGTI for the treatment of post-catheterization femoral pseudoaneurysms (6), because of

intraabdominal localization it was not suitable for our case. For these reasons we preferred less invasive and much comfortable technique in our patient. We have not any complication after the procedure as in the literature (7). Pseudoaneurysm case due to inferior epigastric artery injury is not available in the literature. For this reason we present a LC induced pseuoaneursym that treated with percutaneous thrombin injection. The fact that LC may be associated with pseudoaneurysms should be kept in mind and it has relatively easy radiological management.

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