



# The Unexpected Late Complication due to Spilled Gallstones: Collect as Much as Possible the Next Time

## Dağılan Safra Taşları Nedeniyle Beklenmedik Geç Komplikasyon; Bir Daha ki Sefer Mümkün Olduğu Kadar Toplayın

Fatih Başak<sup>1</sup>, Erdem Kınacı<sup>2</sup>, Oğuzhan Dinçel<sup>3</sup>, Acar Aren<sup>1</sup>

### Abstract / Öz

Spillage of bile and gallstones has been reported in the literature with an incidence of 6% of all laparoscopic cholecystectomies. This spillage can act as a septic focus and cause various complications. We present the case of a patient with abdominal and flank abscesses 10 years after laparoscopic cholecystectomy. The abscesses were drained by the percutaneous method under the guidance of ultrasound. No laparotomy or further treatment was needed. In the etiology of unexpected abdominal or flank abscess, abscesses due to dropped gallstones should be considered as a possible diagnosis in patients having a history of previous laparoscopic cholecystectomy. Surgeons must pay careful attention and collect as many dropped gallstones as possible during laparoscopic cholecystectomy.

**Keywords:** Cholecystectomy, laparoscopic, gallstones, abscess

Literatürde safra ve safra taşı dökülmesinin tüm laparoskopik kolesistektomilerin %6'sında görüldüğü bildirilmiştir. Bu dökülme septik odak olarak hareket ve çeşitli komplikasyonlara neden olabilir. Bu çalışmada on yıl önce laparoskopik kolesistektomi ameliyatı olan karın ve lomber bölgede apse gelişen olguyu sunuyoruz. Apseler ultrason altında kılavuzluğunda perkütan yöntemle drene edildi. Laparotomi ya da daha fazla tedaviye ihtiyaç olmadı. Karın ve lomber bölgede beklenmedik şekilde görülen apse sebebi olarak, laparoskopik kolesistektomi öyküsü olan hastalarda düşen safra taşı sonrası gelişen apse olası bir tanı olarak düşünülmelidir. Cerrahlar laparoskopik kolesistektomi sırasında düşen taşları toplamak için mümkün olduğunca nihai dikkat göstermelidir.

**Anahtar Kelimeler:** Laparoskopik, kolesistektomi, safra taşı, apse

### Introduction

Laparoscopic cholecystectomy (LC) as a gold standard procedure for treating symptomatic cholelithiasis has certain complications. Some of these complications (e.g., common bile duct injury) have shown lower incidence over time as experience and technology has improved; however, the incidence of gallstone spillage remains unchanged. The incidence of gallbladder perforation during LC has been reported as 18%, and gallstones are spilled in approximately 40% of these cases. Spillage of gallstones has been reported in 6% of all LCs. The incidence of lost gallstones has been reported to be 16%–50% (1, 2).

Lost gallstones act as a septic focus and can cause numerous complications. A large number of different presentations have been described after gallstone spillage following LC in the literature; however, late presentation is rare in the literature (3-6). In this study, we present the case of a patient with abdominal and flank abscesses 10 years after LC.

### Case Report

A 77-year-old man presented with a spontaneously draining right flank abscess. He suffered from vague abdominal pain for a long time. His clinical record showed previous LC 10 years ago. On admission, his white blood cell count was 15,000/ $\mu$ L, C-reactive protein level was 6 mg/L, and other laboratory test results were normal. Abdominal physical examination showed little tenderness in the right upper quadrant. Abdominal computed tomography revealed three abscesses, from the posterior of the liver to the right flank, and an idle metallic clip out of operation area adjacent to the abscess at the posterior of the liver (Figure 1). The abscess in the flank was drained by making an incision at the drainage area, and two gallstones, approximately of 5–8 mm in diameter, were retrieved. The remaining two abdominal abscesses had a connection to each other, and both were percutaneously drained under the guidance of ultrasound two days after the first open drainage (Figure 2). *Escherichia coli* was isolated through a microbiological examination of the drained material. Antibiotics used for susceptibility testing were ampicillin, ampicillin–sulbactam, cefazolin, ciprofloxacin, co-trimoxazole, gentamicin, ceftriaxone, and cefoperazone. The isolated organism was susceptible to all antibiotics. Ampicillin–sulbactam was selected for medical treatment. Complaints and laboratory findings of the patient recovered after the drainage of abscesses and medication. The patient was uneventfully discharged on the 14<sup>th</sup> day of hospitalization. No problems were detected in the patient's follow-up after 24 months. Written informed consent was obtained from the patient.

### Discussion

Laparoscopic cholecystectomy is the gold standard procedure for the management of gallstone disease. Spillage of gallstones during operations is fairly common and occurs in approximately

<sup>1</sup>Clinic of General Surgery, Ümraniye Training and Research Hospital, Istanbul, Türkiye

<sup>2</sup>Clinic of General Surgery, Istanbul Training And Research Hospital, Istanbul, Türkiye

<sup>3</sup>Department of General Surgery, Adıyaman University Training and Research Hospital, Adıyaman, Türkiye

#### Address for Correspondence

#### Yazışma Adresi:

Fatih Başak

E-mail: fatihbasak@gmail.com

Received/Geliş Tarihi:

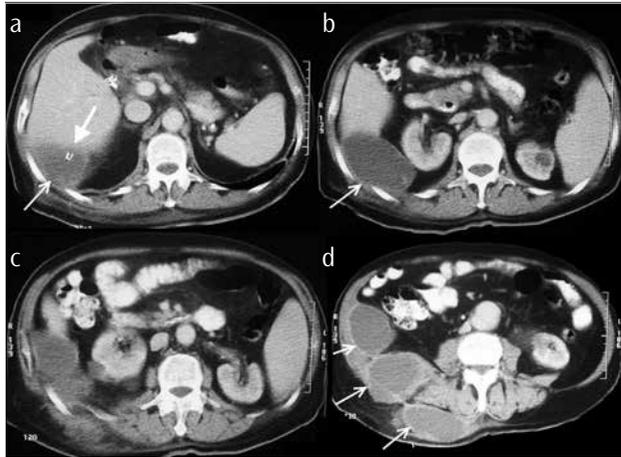
23.09.2015

Accepted/Kabul Tarihi:

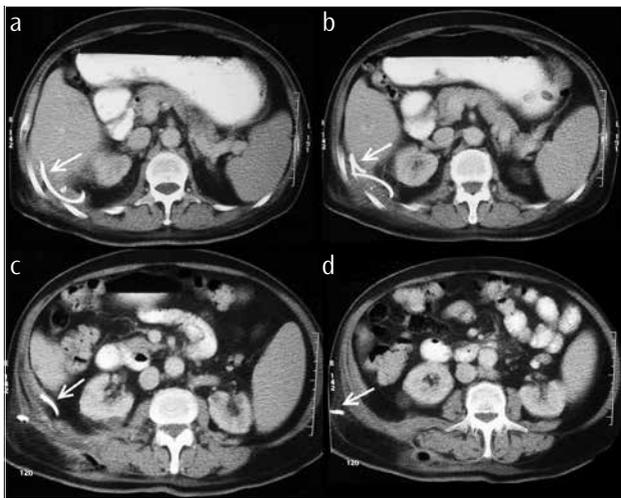
25.11.2015

© Copyright 2016 by Available online at  
www.istanbulmedicaljournal.org

© Telif Hakkı 2016 Makale metnine  
www.istanbultipdergisi.org web sayfasından  
ulaşılabilir.



**Figure 1. a-d.** Computed tomography images reveal an idle metallic clip (full arrow) and multiple abscesses (arrows)



**Figure 2. a-d.** Computed tomography images show no remaining abscesses after drainage with a percutaneous catheter (arrow)

6% of patients (1). Patients are often admitted with the complaint of right upper quadrant pain, and the common presentation of retained gallstones is an abdominal abscess (2). Various spilled gallstone presentations have been reported like flank abscess due to gallstone migration, subdiaphragmatic abscess fistulized to the bronchial tree that presented with gallstone expectoration (3, 4).

Careful dissection during LC is mandatory to prevent perforation of the gallbladder and spillage of gallstones. Spillage of gallstones may not cause a complication in most cases; it is possibly related to the amount and size of gallstones. If rupture and spillage occurs, surgeons should make an utmost effort to retrieve dropped gallstones from the peritoneal cavity. The incidence of complications because of spilled gallstones is low; consequently, conversion to an open procedure is usually not suggested (5, 6).

The management of complications of spilled gallstones depends on symptoms and clinical findings and usually involves the percutaneous drainage of abscesses with or without gallstone removal (2, 5, 6). In the present report, the abscesses were drained by the percutaneous method under the guidance of ultrasound. Peravali et al. (7) mentioned that laparoscopy is a preferable method for drainage and gallstone removal. However, we preferred percutaneous drainage to open or laparoscopic drainage because of the location of the abscesses and gallstone. Fortunately, we retrieved

the spilled gallstones by open drainage at the flank area. However, laparoscopy would have been performed if any recurrence of the condition was detected at the follow-up.

Zilbershtein et al. (3) reported multilocular flank abscess due to gallstone migration 18 months after LC. In the literature, the presentation of complications after LC in the early postoperative period is frequent; however, here we presented the case of a patient with abdominal and flank abscesses 10 years after LC. Even after 10 years, the risk of complications of spilled gallstones continues to manifest.

## Conclusion

Awareness of late LC complications is very important, and surgeons must pay careful attention and collect as many dropped gallstones as possible during LC. Rare complications of dropped gallstones should be considered as a possible diagnosis in patients having a history of previous LC, even a long time after surgery.

**Informed Consent:** Written informed consent was obtained from patient who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept - O.D., F.B., E.K.; Design - O.D., F.B., E.K.; Supervision - F.B.; Data Collection and/or Processing - O.D., E.K., A.A.; Analyse and/or Interpretation - O.D., F.B., E.K., A.A.; Literature Review - O.D., A.A.; Writing - O.D., F.B., E.K.; Critical Review - F.B., E.K.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

**Hasta Onamı:** Yazılı hasta onamı bu çalışmaya katılan hastadan alınmıştır.

**Hakem değerlendirmesi:** Dış bağımsız.

**Yazar Katkıları:** Fikir - O.D., F.B., E.K.; Tasarım - O.D., F.B., E.K.; Denetleme - F.B.; Veri Toplaması ve/veya İşlemesi - O.D., E.K., A.A.; Analiz veya Yorum - O.D., F.B., E.K., A.A.; Literatür Taraması - O.D., A.A.; Yazı Yazan - O.D., F.B., E.K.; Eleştirel İnceleme - F.B., E.K.

**Çıkar Çatışması:** Yazarlar çıkar çatışması bildirmemişlerdir.

**Finansal Destek:** Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

## References

- Schafer M, Suter C, Klaiber C, Wehrli H, Frei E, Krahenbuhl L. Spilled gallstones after laparoscopic cholecystectomy. A relevant problem? A retrospective analysis of 10,174 laparoscopic cholecystectomies. *Surg Endosc* 1998; 12: 305-9. [\[CrossRef\]](#)
- Brockmann JG, Kocher T, Senninger NJ, Schurmann GM. Complications due to gallstones lost during laparoscopic cholecystectomy. *Surg Endosc* 2002; 16: 1226-32. [\[CrossRef\]](#)
- Zilbershtein S, Kessler A, Greenberg R, Skornick Y, Avital S. Multilocular flank abscess due to stone migration following laparoscopic cholecystectomy with spillage of gallstones. *J Laparoendosc Adv Surg Tech A* 2006; 16: 374-7. [\[CrossRef\]](#)
- Chopra P, Killorn P, Mehran RJ. Cholelithoptysis and pleural empyema. *Ann Thorac Surg* 1999; 68: 254-5. [\[CrossRef\]](#)
- Dida K, Mostafa G. Complications of spilled gallstones after laparoscopic cholecystectomy. *Am Surg* 2013; 79: E106-7.
- Demirbas BT, Gulluoglu BM, Aktan AO. Retained Abdominal Gallstones After Laparoscopic Cholecystectomy: A Systematic Review. *Surg Laparosc Endosc Percutan Tech* 2015; 25: 97-9. [\[CrossRef\]](#)
- Peravali R, Harris A. Laparoscopic management of chronic abscess due to spilled gallstones. *JSL* 2013; 17: 657-60. [\[CrossRef\]](#)