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## Retained gallbladder stones in trocar site hernia

AIM: Retained stones after laparoscopic cholecystectomy occur after perforated gallbladder during surgery. A trocar site hernia with 8 retained gallstones is presented.

PATIENT-METHOD: A 54-year-old female presented to our clinics with a paraumbilical hernia in trocar site. The patient had laparoscopic cholecystectomy in another hospital one year ago. Retained stones were noticed in the trocar site while preparing patients for hernia surgery. The patient had laparoscopic hernia repair with the removal of retained stones. 8 stones sized up to 2 cm were taken out of the abdomen. It seems to be the first case of retained stones in trocar site hernia.

CONCLUSION: Gallbladder perforations are common during laparoscopic cholecystectomy due to traction with forceps or inflammation. Careful inspection for spillage stone should be done.

KEY WORDS: Laparoscopic cholecystectomy, Retained Stones, hernia, Trocar Site

### Introduction

Gallbladder perforation is common during laparoscopic cholecystectomy. In previously printed papers, the perforation rate was up to 40% <sup>1-7</sup>. Perforation causes the spillage of gall bladder content including stones. Surgeons try to remove all stones, but sometimes stones could be lost between the omentum and bowel loop. However, careless exploration is also one of the reasons for retained stones. Port-site infection and hernias are among the most of the complications following laparoscopic cholecystectomy <sup>8</sup>. In this report, a case of paraumbilical hernia in trocar site applied for surgical repair of hernia and coincidentally found with so many stones in the hernia sac and intraabdominal omentum is presented. It seems to be the first case of retained stones in trocar site hernia.

## Case Presentation

A 54-year-old female presented to our clinics with a paraumbilical hernia in the trocar site. The patient had laparoscopic cholecystectomy in another hospital one year ago. While preparing patients for hernia surgery, ultrasonography showed omental tissue and stone in the hernia sac.

The patient was taken to the operating room for laparoscopic exploration and repair of the hernia.

Prophylactic antibiotics were administered at the time of induction of anesthesia.

Under general anesthesia, one 10-mm port at the left subcostal line and two 5-mm port at the left anterior axillary line were inserted into the abdominal cavity. Laparoscopic exploration of the omentum and hernia site revealed 8 bile stones sized between 1-2 cm in the hernia sac and abdominal cavity (Fig. 1). Bile stones and resected omentum was taken out of the abdomen with endobag (Figs. 2-3).

The hernia was repaired with intraperitoneal onlay mesh methods. The hernia defect size was 4 cm. Macroporous mesh 12x12 cm was fixed with a tacker (Figs. 4-5). The patient received 24 h of prophylactic antibiotics and was discharged home three days post the procedure.

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Fig. 1: Retained stones in omentum entering hernia sac.



Fig. 4: Hernia defect after removing omentum and Stones



Fig. 2: Resected omentum with stones.



Fig. 3: Gallbladder retained stones sized up to 2 cm.

# Discussion

Laparoscopic cholecystectomy is one of the common operations for general surgeons worldwide. Although opera-



Fig. 5: Laparoscopic mesh repair of hernia.

tion for gallstones is not suggested, most of these patients are operated laparoscopicaly. Laparoscopic cholecystectomy has a low complication rate with low morbidity and mortality. However, gallbladder perforation during cholecystectomy is common and in the previously printed papers, it was reported between 10- 40 percent of cases <sup>(1-7)</sup>.

Perforations of gallbladder occur during careless dissection thin gallbladder or acutely inflamed gallbladder dissection with the usage of hook diathermy or mechanical tears with forceps during traction of the gallbladder. In the case of the perforated gallbladder, first of all, the perforated site must be closed with a grasper and the specimen should be put into endobag for prevention of spillage of gallstones. Sometimes finding of spillage stones is very difficult in obese and acute inflamed cases. Because stones would enter between bowel loops and omentum and would not be seen if vigorous examination of the abdomen is not done.

Retained stones can cause complications like intra-abdominal abscess formation, obstruction or fistulation. <sup>(2)</sup> Retained stones could cause fistula towards the colon or urinary bladder and cause pleural empyema. The most prevalent form is a transabdominal fistula through the umbilical canal <sup>6</sup>. Capolupo et al <sup>3</sup> reported 198 cases of complications related to spilled gallstones in the literature search. The onset of symptoms was between one week to fifteen years after surgery. Complications were as follows: incidental finding in only two cases, pain in one case, abscess in 87 cases, sinus or cutaneous fistula, bowel or organ erosion or fistulization in 18 cases. Treatment was as follows: in 7 cases no treatment or only antibiotic treatment was required, in 44 cases radiological or surgical drainage, in 56 laparoscopy or laparotomy was needed. In our case, the patient applied to us because of hernia swelling and possible surgical treatment. Retained stones were found incidentally. Although retained stones were many and big, no serious complication was noticed.

As conclusion surgeons should avoid perforation of the gallbladder and if perforation occurs all spillage stones should carefully be taken out in a bag.

### Conclusion

In conclusion, retained gallbladder stones appeared during surgical repair of trocar site hernia seems to be first reported case. Surgeons should avoid perforation of the gallbladder during laparoscopic cholecystectomy and if perforation occurs, all spillage stones should carefully be taken out in a bag.

#### Riassunto

Dopo una colecistectomia laparoscopica può accadere che in caso di perforazione intraoperatoria della colecisti, dei calcoli possano restare in addome. Viene presentato qui il caso di un laparocele in sede di trocar con 8 calcoli biliari trattenuti.

Si tratta di una donna di 54 anni che si è presentata alla nostra clinica con un laparocele paraombelicale nel sito di un trocar. Un anno fa la paziente era stata sottoposta a colecistectomia laparoscopica in un altro ospedale. Pietre trattenute

Mentre si preparava la paziente per il trattamento del lapaocele sono stati notati calcoli ritenuti nel sito del trocar.

Il laparocele laparoscopico è stato riparato chirurgicamente, con la rimozione dei calcoli ritenuti: sono state estratti dall'addome 8 calcoli di dimensioni fino a 2 cm. Questa sembra essere la prima evenienza di calcoli ritenuti nel laparocele di un trocar.

CONCLUSIONE: perforazioni della cistifellea sono comuni durante la colecistectomia laparoscopica a causa della trazione con una pinza o un'infiammazione. È necessario effettuare un'attenta ispezione della pietra di fuoriuscita.

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