

## Unexpected situation during laparoscopic surgery: Appendiceal adhesion to the umbilicus - A case report

### Laparoskopik cerrahide beklenmeyen bir durum: Apendiksin göbeğe yapışıklığı; Olgu sunumu.

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#### ABSTRACT

Laparoscopic surgery is a widely used and safe surgical technique for most surgical abdominal diseases. However, the potential for unexpected complications should always be considered. Preoperatively, for potential pathologies, cases should be evaluated with USG or CT. Perforating lesions that occur during pneumoperitoneum creation for the camera trocar with a Veress needle or blinding technique are among the major complications of laparoscopic surgery. In this paper, a case who underwent cholecystectomy, of periumbilical appendiceal adhesion seen during the operation in the whom with no previous abdominal surgery is presented, and relevant literature is reviewed.

**Keywords:** Laparoscopy; trocar; complication; appendix.

#### ÖZET

Laparoskopik cerrahi, çoğu cerrahi karın hastalığı için yaygın kullanılan ve güvenli bir cerrahi tekniktir. Ancak, beklenmedik komplikasyonların olabileceği potansiyel daima göz önünde bulundurulmalıdır. Olası patolojiler için preoperatif olarak vakalar USG veya CT ile değerlendirilmelidir. Kamera trokarı için Veress iğnesi veya kör teknikle yapılan pnömoperitoneum oluşturma sırasında oluşan perforasyon lezyonları, laparoskopik cerrahinin önemli komplikasyonları arasındadır. Bu makalede, daha önce karın cerrahisi veya inflamasyon öyküsü olmayan operasyon sırasında görülen periumbilikal apandisit yapışıklığı olan bir vaka sunulmuş ve ilgili literatür gözden geçirilmiştir.

**Anahtar kelimeler:** Laparoskopi; trokar; komplikasyon; apendiks

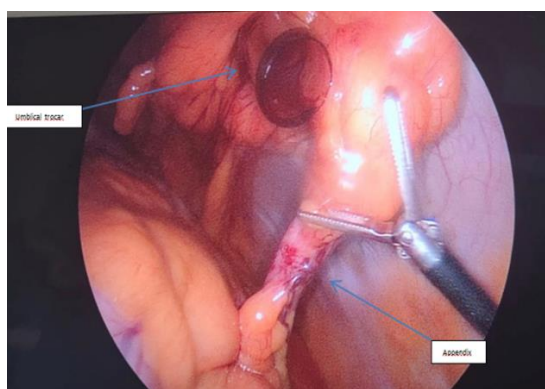
#### INTRODUCTION

Laparoscopic surgery is a minimally invasive surgical technique that has become the first-line operative approach for many abdominal diseases (1,2). While laparoscopic surgery is generally safe and effective, unexpected complications can occur, and surgeons must always consider the potential for these complications (3,4). Perforating injuries during pneumoperitoneum creation with a Veress needle or blind insertion of the camera trocar are among the

major complications of laparoscopic surgery. Adhesions, which are commonly seen in patients who have previously undergone abdominal surgery or had peritoneal inflammation, can also pose a risk during laparoscopic surgery (5). In this article, we present a case of appendiceal adhesion to the periumbilical area during laparoscopic cholecystectomy and review the relevant literature.

### CASE

A 62-year-old male farm-worker with no history of abdominal surgery or inflammation presented to our hospital with a 3-month history of recurrent right-upper-quadrant pain. Ultrasound examination showed multiple calculi in the gallbladder. MRCP and preoperative hematologic and biochemical tests were normal. We suggested a laparoscopic cholecystectomy, Pneumoperitoneum was created with a Veress needle, and during the exploration, a periumbilical adhesion of the appendix was observed (Figure 1). The gallbladder was hydropic and inflamed and was surgically removed via laparoscopy. The appendix was not injured and was left in place (Figure 2). The patient had an uneventful postoperative recovery and was discharged on the second day.



**Figure 1:** The appendix was attached to the umbilicus.



**Figure 2:** The appendix was seen normal.

### DISCUSSION

The laparoscopic technique is a safe, effective, and easy-to-apply method for abdominal surgery (1,4). However, it is important to consider the potential for unexpected complications. Before surgery, patients should be evaluated with Ultrasonography (USG), Computed tomography (CT), and/or Magnetic Resonance Imaging (MRI) to check for any potential pathologies (4,5).

During laparoscopic surgery, the first step is to create a pneumoperitoneum using either a blind or open technique. However, if there are any adhesions in the periumbilical area, major complications can occur. Adhesions are commonly seen in patients who have previously undergone abdominal surgery or have had peritoneal inflammation (5,6).

Perforating lesions that occur during the creation of pneumoperitoneum for the camera trocar using a Veress needle or blind technique are among the major complications of laparoscopic surgery (7). Therefore, suitable techniques should be used during pneumoperitoneum creation to minimize the risk of complications.

In cases where unexpected complications arise, such as in the case of a patient who underwent laparoscopic cholecystectomy and was found to have an appendix attached to the umbilicus, organ injury becomes inevitable. Therefore, preoperative evaluation is crucial.

The use of an open technique can virtually eliminate injuries to viscera and significantly improve patient safety during the creation of pneumoperitoneum (8,9). We recommend the open technique as the routine approach for all laparoscopic interventions. If the establishment of pneumoperitoneum using either a Veress needle or blind introduction of the camera is necessary, preoperative evaluation of the periumbilical area should be performed with ultrasonography (10).

In conclusion, unexpected findings can occur during laparoscopic surgery, and it is crucial to remain vigilant and prepared for such occurrences. A thorough preoperative evaluation and the use of appropriate techniques can help to prevent complications and ensure a successful outcome for the patient.

### Conflict of interest

The authors have no conflict of interest to declare.

### PS

This scientific paper will presentation at Digestive System Surgery and Proctology, June 2023 in San Francisco/ USA.

### REFERENCES

1. Köckerling F, Schneider C, Reck T. Die offene Laparoskopie zur Vermeidung von Punktionsverletzungen [Open laparoscopy for prevention of puncture injuries]. *Chirurg.* 1996;67(2):183-187.
2. Agarwala N, Liu CY. Safe entry techniques during laparoscopy: left upper quadrant entry using the ninth intercostal space-a review of 918 procedures. *J Minim Invasive Gynecol.* 2005;12(1):55-61.
3. Teoh B, Sen R, Abbott J. An evaluation of four tests used to ascertain Veres needle placement at

- closed laparoscopy. *J Minim Invasive Gynecol.* 2005;12(2):153-158.
4. Polat FR, Abci I, Coskun I, Uranues S. The importance of intraoperative cholangiography during laparoscopic cholecystectomy. *JLS.* 2000;4(2):103-107.
  5. Mari G, Scanziani R, Auricchio S, Crippa J, Maggioni D. Laparoscopic Surgery in Patients on Peritoneal Dialysis: A Review of the Literature. *Surg Innov.* 2017;24(4):397-401.
  6. Szomstein S, Lo Menzo E, Simpfendorfer C, Zundel N, Rosenthal RJ. Laparoscopic lysis of adhesions. *World J Surg.* 2006;30(4):535-540.
  7. Polat FR. Hydatid cyst: open or laparoscopic approach? A retrospective analysis. *Surg Laparosc Endosc Percutan Tech.* 2012;22(3):264-266.
  8. Wormser C, Runge JJ. Advances in Laparoscopic Surgery. *Vet Clin North Am Small Anim Pract.* 2016;46(1):63-84.
  9. Polat FR, Polat S, Sultanoglu E. Laparoscopic treatment of hydatid cyst of the liver: a case report. *JLS.* 2005;9(2):245-246.
  10. León Ferrufino F, Varas Cohen J, Buckel Schaffner E, Crovari Eulufi F, Pimentel Müller F, Martínez Castillo J, Jarufe Cassis N, Boza Wilson C. Simulation in laparoscopic surgery. *Cir Esp.* 2015;93(1):4-11.