

# Laparoscopic management of external iliac vein injury

Ibrahim Yalcin, Gozde Sahin

## CASE REPORT

A 57-year-old white woman was referred to our division for incomplete surgically staged endometrial cancer. She was taken to the operating room for laparoscopic surgical staging. Incidental right external vein injury occurred during pelvic lymphadenectomy.

Video 1 shows an incidental thermal full thickness injury of right external iliac vein and repairing it laparoscopically during a pelvic lymphadenectomy procedure.

A 3 mm laceration to the right external iliac vein occurred while right pelvic lymphadenectomy (Figure 1). After immediate clamping of the injury site with graspers, the laceration on the right external iliac vein was primarily repaired by use of a running intracorporeal 4-0 polypropylene suture (Figure 2). The insufflation pressure was increased to 20 mmHg for the duration of primary repair for 60 seconds to limit the hemorrhage. The patient was not obese and her body mass index (BMI) was 24.

## DISCUSSION

Minimal invasive techniques are more popular in cancer surgery. Laparoscopy has lots of advantages in cancer patients as early mobilization and short hospitalization. It is one of the most commonly performed procedures. Injury to a major retroperitoneal vessel occurs in 0.3–1.0% of procedures, most commonly during laparoscopic entry while placing the Veress needle or primary trocar. Veins have much thinner walls compared with arteries so veins might be at greatest risk of laceration during

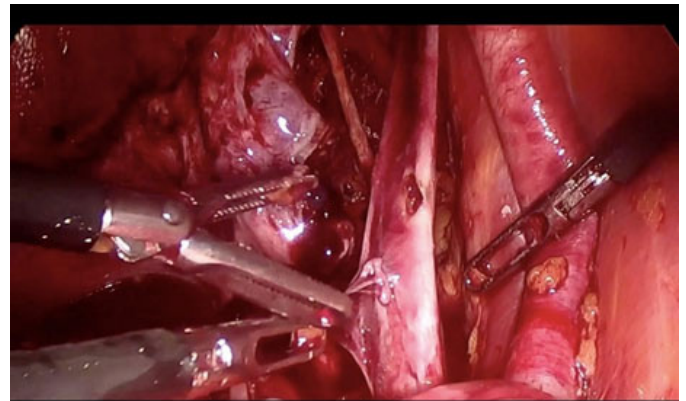


Figure 1: External iliac vein injury.

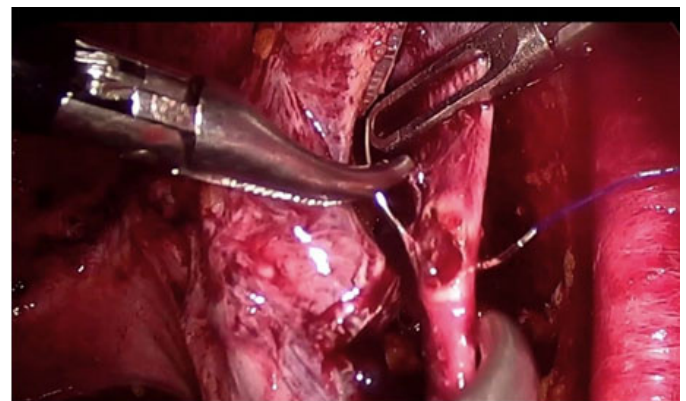
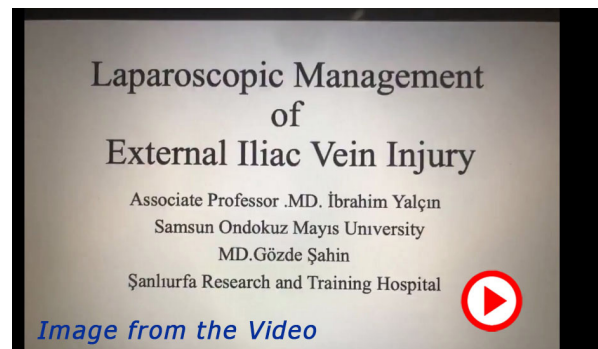


Figure 2: Suturing of external iliac vein.



**Video 1:** Laparoscopic management of external iliac vein injury.

Video URL: <https://www.ijcriog.com/archive/2021-videos/100101Z08IY2021-Sahin/video1.mp4>



Ibrahim Yalcin<sup>1</sup>, Gozde Sahin<sup>2</sup>

**Affiliations:** <sup>1</sup>Associate Professor, Gynecologic Oncology Department, Samsun Ondokuz Mayıs University, Samsun, Turkey; <sup>2</sup>Medical Doctor, Gynecologic Oncology Department, Sanliurfa Research and Training Hospital, Sanliurfa, Turkey.

**Corresponding Author:** Gozde Sahin, Sanliurfa Research and Training Hospital, Sanliurfa, Turkey; Email: sahin.gozde1983@gmail.com

Received: 18 October 2021

Accepted: 01 December 2021

Published: 27 December 2021

surgical dissection [1, 2]. Risk of injury is more in obese patients and after previous surgeries.

Vessel injuries can occur during trocar placement or insertion of Veress needle mostly [2] but dissections, uncontrol tractions and electricity, as in our case, can cause damage in vessels. The most common vessels injured are branches of distal aorta, iliac vessels, and inferior vena cava. The second most common cause of death during laparoscopy is major vascular injury with a mortality rate of 6.37% [3, 4].

Management of vascular injuries needs immediate recognition of injury and rapid hemostasis and they can be done by laparoscopy with experienced surgeons or laparotomy.

Lymphadenectomy is a part of operation in gynecological cancer staging surgeries. In our case we had injury on right external iliac vein during lymphadenectomy for endometrial cancer. Energy sources must be used carefully during lymphadenectomy, in old patients vessel walls are more fragile and vein walls are thinner than arteries. Coagulation can be used in injuries smaller than 2 mm, but injuries larger than 2 mm must be repaired. In our case we had 3 mm injury and we repaired it laparoscopically [5]. If there is no availability of experienced surgeon when a major vessel injury occurs during laparoscopy, vascular surgeon is recommended.

## CONCLUSION

Repair of external iliac vein injury, during laparoscopy can be performed successfully and safely by experienced laparoscopic surgeons.

**Keywords:** Complete hydatidiform mole, Human serum chorionic gonadotropin, Intrauterine pregnancy

### How to cite this article

Yalcin I, Sahin G. Laparoscopic management of external iliac vein injury. *J Case Rep Images Obstet Gynecol* 2021;7:100101Z08IY2021.

Article ID: 100101Z08IY2021

\*\*\*\*\*

doi: 10.5348/100101Z08IY2021CV

## REFERENCES

1. Makai G, Isaacson K. Complications of gynecologic laparoscopy. *Clin Obstet Gynecol* 2009;52(3):401–11.

2. Sandadi S, Johannigman JA, Wong VL, Blebea J, Altose MD, Hurd WW. Recognition and management of major vessel injury during laparoscopy. *J Minim Invasive Gynecol* 2010;17(6):692–702.
3. Barbosa Barros M, Lozano FS, Queral L. Vascular injuries during gynecological laparoscopy—The vascular surgeon's advice. *Sao Paulo Med J* 2005;123(1):38–41.
4. Dixon M, Carrillo EH. Iliac vascular injuries during elective laparoscopic surgery. *Surg Endosc* 1999;13(12):1230–3.
5. Chiantera V, Erdemoglu E, Vercellino G, Straube M, Schneider A. Laparoscopic management of external iliac artery injury using yasargil clamps and intracorporeal suture. *J Minim Invasive Gynecol* 2011;18(4):516–9.

\*\*\*\*\*

## Author Contributions

Ibrahim Yalcin – Conception of the work, Design of the work, Acquisition of data, Interpretation of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Gozde Sahin – Conception of the work, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

## Guarantor of Submission

The corresponding author is the guarantor of submission.

## Source of Support

None.

## Consent Statement

Written informed consent was obtained from the patient for publication of this article.

## Conflict of Interest

Authors declare no conflict of interest.

## Data Availability

All relevant data are within the paper and its Supporting Information files.

## Copyright

© 2021 Ibrahim Yalcin et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.

Access full text article on  
other devices



Access PDF of article on  
other devices





INTERNATIONAL JOURNAL OF  
CASE REPORTS AND IMAGES



VIDEO JOURNAL OF  
CLINICAL RESEARCH



VIDEO JOURNAL OF  
BIOMEDICAL SCIENCE



INTERNATIONAL JOURNAL OF  
HEPATOBIILIARY AND  
PANCREATIC DISEASES



INTERNATIONAL JOURNAL OF  
BLOOD TRANSFUSION AND  
IMMUNOHEMATOLOGY



EDORIUM JOURNAL OF  
OPHTHALMOLOGY



**Submit your manuscripts at**  
[www.edoriumjournals.com](http://www.edoriumjournals.com)



EDORIUM JOURNAL OF  
MEDICINE



EDORIUM JOURNAL OF  
CARDIOTHORACIC AND  
VASCULAR SURGERY



JOURNAL OF CASE REPORTS  
AND IMAGES IN ORTHOPEDICS  
AND RHEUMATOLOGY



EDORIUM JOURNAL OF  
PSYCHOLOGY



EDORIUM JOURNAL OF  
CELL BIOLOGY



JOURNAL OF CASE REPORTS AND IMAGES IN  
DENTISTRY



EDORIUM JOURNAL OF  
CANCER



EDORIUM JOURNAL OF  
PSYCHIATRY



JOURNAL OF CASE REPORTS AND  
IMAGES IN INFECTIOUS DISEASES



EDORIUM JOURNAL OF  
ANATOMY AND EMBRYOLOGY



EDORIUM JOURNAL OF  
SURGERY



JOURNAL OF CASE REPORTS  
AND IMAGES IN PATHOLOGY



EDORIUM JOURNAL OF  
ANESTHESIA