

Original Article



Repair of diaphragmatic injury and placement of tube thoracostomy during right upper quadrant peritonectomy

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Received: Jun 18, 2015

Revised: Jul 13, 2015

Accepted: Aug 19, 2015

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Conflict of Interest

No potential conflict of interest relevant to this article was reported.

ABSTRACT

Objective: Patients with advanced or recurrent ovarian cancer often have metastatic disease in the upper abdominal region, especially to the right hemidiaphragm, which requires diaphragmatic resection in order to achieve optimal cytoreduction. The aim of this surgical video is to demonstrate repair of a diaphragmatic injury and placement of tube thoracostomy during right upper quadrant peritonectomy in a patient with recurrent ovarian cancer.

Methods: This is the case of a 45-year-old woman presented with platinum sensitive recurrent ovarian cancer. Abdomen computed tomography also confirmed peritoneal carcinomatosis and pelvic recurrent mass. HIPEC was administered after complete cytoreduction including bilateral upper quadrant peritonectomy, during which diaphragmatic injury occurred near the central tendon and pleural cavity was entered. We inserted a chest tube through the 6th intercostal space in the anterior axillary line in order to prevent postoperative massive pleural effusion. Diaphragmatic defect was closed primarily after the tube placement. The chest tube was withdrawn on the third postoperative day and the patient was discharged on postoperative day 25 without any complications.

Results: The central tendon of diaphragm is the most vulnerable part for lacerations. Diaphragmatic repairs could be performed by various techniques; interrupted or continuous, locking or non-locking sutures, with either permanent or absorbable materials. In our view, all of the techniques provide similar results and surgeons can choose any of them as long as they are comfortable with the procedure.

Conclusion: In most cases, these lacerations can be repaired primarily without necessitating tube thoracostomy. However, performance of HIPEC can cause massive pleural effusions which can lead to significant pulmonary morbidity. Therefore, retrograde placement of the chest tube under direct vision is quite straightforward when the diaphragm is opened.

Keywords: Diaphragmatic Injury; Ovarian Neoplasms; Tube Thoracostomy

VIDEO CLIP

Repair of diaphragmatic injury and intraoperative placement of a tube thoracostomy during right upper quadrant peritonectomy.



Video can be found with this article online at <http://ejgo.org/src/sm/jgo-27-e6-s001.mp4>.