

Video Article



Transabdominal cardiophrenic lymph node dissection for cytoreductive surgery in advanced ovarian cancer

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Ethical approval

Informed consent was waived by the Institutional Review Board for the follow-up loss (number: NCC2021-0155).

ABSTRACT

Objective: Minimizing residual tumors is one of the most important prognostic factors in the management of advanced ovarian cancer [1]. In ovarian cancer patients with cardiophrenic lymph node (LN) metastases, transabdominal cardiophrenic lymph node dissection (CPLND) has been performed along with the surgery on the primary site [2]. However, CPLND for the complicated locations in the thoracic cavity is still technically challenging. This video aims to share our surgical technique for the transabdominal CPLND.

Methods: A 60-year-old woman who presented with suspicious bilateral ovarian cancer was hospitalized for cytoreductive surgery. Preoperative CT demonstrated peritoneal seeding and multiple LN metastases including right anterior, lateral, posterior, and left anterior cardiophrenic LNs. The gynecology and general surgery team underwent hysterectomy, bilateral salpingo-oophorectomy, supracolic omentectomy, lower anterior resection, right diaphragmatic and bladder peritonectomy, pelvic and paraaortic LN dissection, and appendectomy. The thoracic surgeon took over the operation because the pelvic cavity was regarded as R0. CPLND was performed by transabdominal, subxiphoid approach. The procedure is narrated in the video.

Results: Complete clearance of CPLN leaving no gross residual disease was possible without complication. A long, transverse incision of the anterior diaphragm was closed with a 1-0 polypropylene in the way of double layered continuous running suture and 8 times ties for the final knot.

Conclusion: Transabdominal CPLND can be used safely and effectively without change of patient's position and with minimal diaphragmatic injury. However, this approach may be unfeasible for metastatic internal mammary LN dissection and still needs meticulous surgical skills to avoid complications.

Keywords: Lymph Node; Ovarian Cancer; VATS; Pericardium

Presentation

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Conflict of Interest

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

Author Contributions

Conceptualization: Y.H.C., P.S.Y.; Formal analysis: Y.H.C.; Investigation: Y.H.C.; Methodology: Y.H.C., K.M.S., L.J.M., C.J.H., P.S.Y.; Resources: P.S.Y.; Supervision: P.S.Y.; Validation: Y.H.C., P.S.Y.; Writing - original draft: Y.H.C.; Writing - review & editing: Y.H.C., K.M.S., L.J.M., C.J.H., P.S.Y.

VIDEO CLIP



Transabdominal cardiophrenic lymph node dissection for cytoreductive surgery in advanced ovarian cancer. Video can be found with this article online at <https://ejgo.org/src/sm/jgo-33-e6-s001.avi>.

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REFERENCES

1. du Bois A, Reuss A, Pujade-Lauraine E, Harter P, Ray-Coquard I, Pfisterer J. Role of surgical outcome as prognostic factor in advanced epithelial ovarian cancer: a combined exploratory analysis of 3 prospectively randomized phase 3 multicenter trials: by the Arbeitsgemeinschaft Gynaekologische Onkologie Studiengruppe Ovarialkarzinom (AGO-OVAR) and the Groupe d'Investigateurs Nationaux Pour les Etudes des Cancers de l'Ovaire (GINECO). *Cancer* 2009;115:1234-44.
[PUBMED](#) | [CROSSREF](#)
2. Yoo HJ, Lim MC, Song YJ, Jung YS, Kim SH, Yoo CW, et al. Transabdominal cardiophrenic lymph node dissection (CPLND) via incised diaphragm replace conventional video-assisted thoracic surgery for cytoreductive surgery in advanced ovarian cancer. *Gynecol Oncol* 2013;129:341-5.
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