



Transdiaphragmatic resection of enlarged cardiophrenic lymph node during interval debulking surgery for advanced ovarian cancer

Susan Addley, Matteo Morotti, Ciro Pinelli, Hooman Soleymani majd*

Oxford University Hospitals NHS Foundation Trust, United Kingdom

ABSTRACT

Surgery in advanced ovarian malignancy is indicated when complete debulking can be achieved. In patients with disease above the diaphragm, achieving R0 can present a surgical challenge and bring into question the feasibility of surgery (Soleymani majd et al., 2016; Pinelli et al., 2019).

We present a surgical video demonstrating the technique of cardiophrenic lymph node dissection in advanced ovarian malignancy.

Following type 3 liver mobilisation, the diaphragm is stripped and muscle opened to gain access to the thoracic cavity. Transdiaphragmatic assessment of the cardiophrenic lymph node bundle is performed. A bulky node – correlating with pre-operative radiology – is removed using an advanced energy device, maintaining the surrounding lung parenchyma and underlying pericardium safely in view throughout. The diaphragmatic is closed using a loop non-absorbable suture and placing continuous, locking sutures (Addley et al., 2021).

We demonstrate that the presence of cardiophrenic lymphadenopathy is not an obstacle to complete debulking. By employing a trans-diaphragmatic technique to gain thoracic access, involved cardio-phrenic nodes – and hence all visible disease – can be surgically excised, successfully achieving R0 status and offering patients optimal prognosis.

Authors contribution

All authors were directly involved in producing the work – Mr Soleymani majd being the operating surgeon; Dr Addley editing and narrating the surgical film; and both Mr Morotti and Mr Pinelli also contributing to the editing process.

CRedit authorship contribution statement

Susan Addley: Writing – original draft, Resources, Project administration, Writing – review & editing. **Matteo Morotti:** Resources, Writing – review & editing. **Ciro Pinelli:** Resources, Writing – review & editing. **Hooman Soleymani majd:** Conceptualization, Supervision.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.gore.2021.100807>.

References

- Soleymani majd, H., Ferrari, F., Manek, S., Gubbala, K., Garruto Campanile, R., Hardern, K., Tozzi, R., 2016. Diaphragmatic peritonectomy vs. full thickness resection with pleuroctomy during Visceral-Peritoneal Debulking (VPD) in 100 consecutive patients with stage IIIc-IV ovarian cancer: A surgical-histological analysis. *Gynecol Oncol* 140 (3), 430–435.
- Pinelli, C., Morotti, M., Casarin, J., Tozzi, R., Alazzam, M., Mavroeidis, V., Soleymanimajd, H., 2019. The feasibility of cardio-phrenic lymph node assessment and removal in patients requiring diaphragmatic resection during interval debulking surgery for ovarian cancer. *J Surg* 6, 1–7.
- Addley, S., Yao, D.S., Soleymani majd, H., 2021. Primary diaphragmatic closure following diaphragmatic resection and cardiophrenic lymph node dissection during interval debulking surgery for advanced ovarian malignancy. *Gynecol Oncol Rep* 9, 36.

* Corresponding author at: Department of Gynae-Oncology, Churchill Hospital, Old Road, Headington, OX3 7LE, United Kingdom.

E-mail address: hooman_sm@yahoo.com (H. Soleymani majd).

<https://doi.org/10.1016/j.gore.2021.100807>

Received 16 November 2020; Received in revised form 19 May 2021; Accepted 31 May 2021

Available online 9 June 2021

2352-5789/© 2021 The Authors.

Published by Elsevier Inc.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).