

Late complication of extended cervical mediastinoscopy

Gokhan Hacıbrahimoglu, MD; Aysegul Cevik, MD; Mehmet Ali Bedirhan, MD; Cemal Asim Kutlu, MD

Extended cervical mediastinoscopy (ECM) is undertaken to examine the invasive stage of primary tumours in the left-upper lobe of the lung and to help diagnose anterior mediastinal lesions.¹ In the literature, few papers deal with ECM; the first on ECM done for diagnostic purposes was a 2002 report by Metin and colleagues on 9 cases.² Complications related to the technique are infrequent and occur during or soon after the procedure; immediate postoperative bleeding and pneumothorax have been reported.^{1,3} We describe an unusual case of a late complication after ECM.

Case report

A 30-year-old man was referred to our clinic for evaluation of an undiagnosed para-aortic lesion. Computed tomography of the thorax showed a 4 cm × 3 cm mass in the anterior segment of the left-upper lobe around the bronchus (Fig. 1).

We performed both cervical mediastinoscopy and ECM. Several biopsies were taken from paratracheal (stations 2L, 4L and 7) and para-aortic lymph nodes (stations 5 and 6). Histology revealed chronic necrotizing granulomatosis in the para-aortic nodes.

The patient was prescribed drugs to treat tuberculosis (TB). On routine follow-up at the third month of treatment, markedly increased liver enzymes indicated the development of toxic hepatitis from the treatment. Anti-TB treatment was suspended for 3 weeks.

The patient presented again during the sixth month of anti-TB treatment with chest pain in his left side. Chest x-rays and CT showed a well-defined opacity at the apicoposterior of the left hemithorax. CT imaging suggested an abscess of about 6.5 cm × 6 cm (Fig. 2). Video-assisted thoracic surgery (VATS) was scheduled to drain the abscess.

Thoracoscopy was used to locate the abscess in the extrapleural space. When drained, the content of the abscess was extremely thick; histopathologic examination reported it as inflammatory material without acid-resistant bacillus (ARB); culturing produced gram-positive cocci.

Discussion

Reports about ECM since Kishner⁴ defined the technique in 1971 are few. Ginsberg¹ and Lopez⁵ and their respective research groups proved the usefulness

of the technique for preoperative staging of primary lung tumours originating from the left lung. ECM allows biopsy of the lymph nodes at stations 5 and 6. The sensitivity (81%–83%) and specificity (99%–100%) of the technique are high, as is its diagnostic value (93%–97%).

Anterior mediastinotomy may likewise be undertaken as a staging and diagnostic procedure for assessment of lesions at the anterior mediastinum and aortic window, with an acceptably low morbidity.⁶ VATS may also be undertaken for diagnosis. In our opinion, opening the chest cavity must be avoided if the lesion is accessible by other techniques. Metin's group² undertook ECM as an alternative technique to mediastinotomy for the diagnosis of anterior mediastinal lesions. Our own experience suggests that ECM has less postoperative morbidity than anterior mediastinotomy and VATS. At our cen-

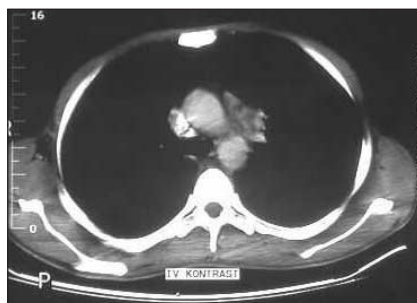


FIG. 1. Computed tomographic image showing a tuberculoid mass in the lung, before mediastinoscopy.



FIG. 2. CT image almost 6 months after extended cervical mediastinoscopy, showing abscess formation.

Yedikule Hospital for Chest Disease and Thoracic Surgery, Istanbul, Turkey

Accepted for publication Sept. 29, 2003

Correspondence to: Dr. Hacıbrahimoglu, Thoracic Surgeon, Nispetiye cad. Profesörler sitesi C3A blok, No:66/8 Etiler 34337, Istanbul, Turkey; fax +90 212 351 50 35; g.hacıbrahim@yahoo.com

tre, ECM is performed on an outpatient basis. Thus, we have found ECM to be superior to mediastinotomy for the evaluation of such lesions.

ECM can be a technical challenge for the surgeon unfamiliar with it, but in experienced hands its mortality rate is under 1% and its morbidity, 1%–3%.¹ Pneumothorax and massive bleeding are the complications reported, with a single mortality (a rate of 1%) reported in Ginsberg's series¹ from injury to the subclavian artery. Experience with ECM as a diagnostic tool is limited and yet to be confirmed. This case is a late complication of the technique, unreported elsewhere in the literature.

Competing interests: None declared.

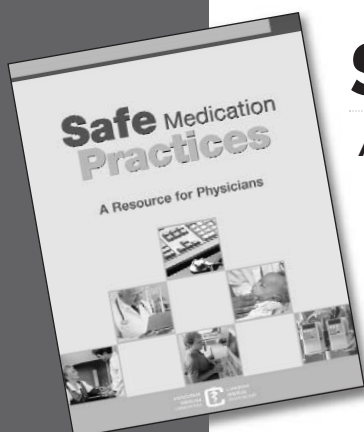
References

1. Ginsberg RJ, Rice TW, Golgberg M, Waters PF, Schmocker BJ. Extended cervical mediastinoscopy: a single staging procedure for bronchogenic carcinoma of the left upper lobe. *J Thorac Cardiovasc Surg* 1987;94:673-8.
2. Metin M, Sayar A, Turna A, Gurses A. Extended cervical mediastinoscopy in the diagnosis of anterior mediastinal masses. *Ann Thorac Surg* 2002;73:250-2.
3. Urschel JD. Conservative management (packing) of hemorrhage complicating mediastinoscopy. *Ann Thorac Cardiovasc Surg* 2000;6:9-12.
4. Kirschner PA. "Extended" mediastinoscopy. In: Jepsen O, Sorenson HR, editors. *Mediastinoscopy*. Denmark: Odense University Press; 1979. p. 131.
5. Lopez L, Varela A, Freixinet J, Quevedo S, Lopez Pujol J, Rodriguez de Castro F, et al. Extended cervical mediastinoscopy: prospective study of fifty cases. *Ann Thorac Surg* 1994;57:555-8.
6. McNeil TM, Chamberlain JM. Diagnostic anterior mediastinotomy. *Ann Thorac Surg* 1966;2:532.

cma.ca

Interested in patient safety?

Check out this new book from the Canadian Medical Association



Safe Medication Practices

A resource for physicians

The only Canadian resource of its kind, this book is an indispensable educational and reference tool for physicians who want to find out more about patient safety and improving medication practices.

Bonus to CMA members: free access to an online course. For details visit cma.ca or contact the CMA Member Service Centre.

To order, contact the CMA Member Service Centre at 888 855-2555, email cmamsc@cma.ca or fax 613 236-8864.
CMA members: \$39.95 Nonmembers: \$49.95 (plus taxes and shipping)

Due to licensing restrictions, this book is available only in Canada. Also available in French.