Letter to the Editor

Role of pre-operative lymphangiogram and lymphangioscintigraphy in the surgical management of spontaneous chylothorax

Venanzio Porziella\textsuperscript{a}, Alfredo Cesario\textsuperscript{a,b,*}, Stefano Margaritorea, Pierluigi Granone\textsuperscript{a}

\textsuperscript{a}Division of General Thoracic Surgery, Catholic University, Rome, Italy
\textsuperscript{b}Pulmonary Rehabilitation, IRCCS San Raffaele, Rome, Italy

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We have read with interest the report from Christodoulou and co-workers \cite{1} regarding the video-assisted thoracic surgery (VATS) treatment of spontaneous (non-traumatic) recurrent chylothorax.

As a matter of fact, due to the respiratory, nutritional and immunological implications, surgery is indicated whereas any conservative treatment failed in controlling this clinical condition. On the basis of their experience on a series of six treated patients, the Authors do conclude that recurrent or persistent non-traumatic chylothorax may be successfully treated by video-assisted right supradiaphragmatic thoracic duct ligation.

We strongly agree with the Authors on their conclusion since we have observed similar evidences in our own experience (adopting the same surgical approach) on 12 cases (10 right sided, 2 left sided) observed and treated in our Institution in the period between January 2001 and December 2005 (in the same period, two cases were treated by an open thoracotomic approach because they were previously submitted elsewhere to video-assisted thoracic duct ligation). Before surgery, all patients had a pleural drainage for almost 2 weeks with a persisting leak >300 ml/day. Four patients developed chylothorax as a result of thoracic irradiation and four cancer (three lymphoma, one breast cancer). In particular, we report a mean operating time of 92 ± 14 min with no mortality or major perioperative complications. A single chest drain was left in place after operation connected with a very mild continuous aspiration for the first 24 h. The drain was removed 5 ± 1 days after the operation (mean). Patient controlled anaesthesia (PCA) and physiotherapy were adopted in all cases. A <100 ml/day leak persisted post-operatively in one patient and was conservatively treated (chest drain, parenteral nutrition—no oral intake) up to the complete resolution 14 days after surgery. Mean hospital stay was 6.2 days (range 3—15).

In this correspondence, we would like to briefly and amicably address the Authors requesting their opinion on the value of pre-operative lymphangiography and lymphangioscintigraphy in this clinical setting. In our series we performed a lymphangiography in 10 patients and lymphangioscintigraphy in 4. These diagnostic procedures did not carry any morbidity and allowed us to obtain a precise definition of the type and location of the chylous leak. Thus, the surgical procedure driven by the results of pre-operative evaluation and selective duct ligation could be accomplished. Whereas aberrant anatomy was pre-operatively identified, the ligation of the visible branches of the thoracic duct was followed by a regional poudrage (2—5.5 g of talc). We strongly advise this kind of pre-operative evaluation since it is able to identify the lymphatic leak and eventual anatomic aberrations and allows a tailored and effective surgery.

Reference


\*Corresponding author. Address: Division of General Thoracic Surgery, Catholic University, Largo A. Gemelli 8, 00168 Rome, Italy. Tel.: +39 3358366161; fax: +39 063051162.
E-mail address: alfcesario@rm.unicatt.it.
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Letter to the Editor

Coronary artery imaging with 64-slice computed tomography from cardiac surgical perspective

Ronit Lavia\textsuperscript{a,*}, Shahar Lavib

\textsuperscript{a}Divisions of Nephrology and Hypertension, Mayo Clinic College of Medicine, 200 First St. S.W., Rochester, MN 55905, USA
\textsuperscript{b}Division of Cardiovascular Diseases, Mayo Clinic College of Medicine, 200 First St. S.W., Rochester, MN 55905, USA

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We read with great interest the article by Plass and colleagues [1].

We have the following comments:

1. As mentioned in the text, there is a significant bias in the CT interpretation since a radiologist conducted a preselection of CT images for the surgeons. It is mentioned that the cardiac surgeons were blinded to the patients’ medical history but not the radiologist. Moreover, patients with coronary disease had relatively significant disease, while the control group had valvular disease and could be relatively easily identified. This potential bias increases the accuracy of the CT.

It might be interesting to compare the cardiovascular surgeons and experienced cardiologist/radiologist interpretations in both methods.

2. There was no need to administer B blockers, but the average heart rate was 65 beats/min. How many of the patients were on beta blockers? What was the heart rate of patients in the 23% (11/50) group? How many of the impaired image quality groups were of the control valvular disease group?

3. One of the best qualities of cardiac CT is its ability to rule out coronary artery disease. This was previously found to be useful in the evaluation of patient before aortic valve replacement [2,3]. The negative predictive value in this article is high in both groups.

This is an important conclusion that we believe should be emphasized.

4. The focus of the article is the coronary evaluation of the cardiac patient performed by a cardiovascular surgeon with two different methods. Although most surgeons are familiar with coronary angiograms, this is not the case for cardiac CT. It is not mentioned what was the training of the surgeons for interpretation of the cardiac CT. We believe it is worth mentioning other data that can be measured from the cardiac CT and is valuable for the cardiovascular surgeon. A cardiac CT is an excellent method for the assessment of the aortic valve area and structure. In patients undergoing reoperative cardiac surgery, the cardiac CT can localize vital mediastinal structures, identify patients at higher risk for injury to the aorta and right ventricle and prevent left internal mammary artery graft injury during sternal reentry [4]. Quantification of RV and LV volumes and systolic function was proved to be accurate with multi detector cardiac CT [5].

This data is invaluable for the cardiovascular surgeon in order to help the physician tailor the most suitable surgery plane for each patient.

References


*Corresponding author. Tel.: +1 507 2547510; fax: +1 507 2800325. E-mail address: lavi.ronit@mayo.edu (R. Lavi).

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Reply to the Letter to the Editor

Reply to Lavi and Lavi

André Plass*, Jürg Grünenfelder,
Michele Genoni
Clinic for Cardiovascular Surgery,
University Hospital Zürich,
Switzerland

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All comments of Lavi and Lavi [1] are very well taken and debatable.

Already mentioned in the article and also by Lavi and Lavi, the evaluation of the MSCT examination can be influenced by the radiologist who is the inter-station between the patients’ examination and the final evaluation by the cardiac surgeon. At present there is no standardized protocol of a complete examination procedure for cardiac surgeons. The radiologist is pre-selecting the images which then already tend to a certain diagnosis.

A possible improved protocol would be the presentation of MSCT images in a way that the reader can choose different images of interest which he is able to scroll through himself.

It is possible that the mixture of patients with diseased and not diseased coronary arteries can improve the accuracy of the MSCT because of the easier evaluation of healthy arteries. However, the identification of valvular disease was not a guarantee for normal coronary arteries. Eleven of the 40 patients of the study group with coronary artery disease also had valvular disease. This means that the identification of valvular disease was not equivalent with no coronary artery disease.

The 10 patients of the control group with no coronary artery disease but with valvular disease were probably easier identifiable. However, also these coronary arteries partly showed wall irregularities and calcifications.

We believe that screening for coronary artery disease with MSCT will play an important role in the future which should be taken into account for the overall accuracy.