Letter to the Editor

Early surgical management of postoperative perforation in the bronchus intermedius membrane: is it a necessity?

Tamer Altinok*, Olgun K. Aribas
Selçuk University, Meram School of Medicine, Department of Thoracic Surgery, Meram, Konya, 42060, Turkey

Received 9 April 2008; accepted 30 July 2008

Keywords: Lung cancer; Complication; Bronchopleural fistula

I read with interest the article titled 'Postoperative perforation in the bronchus intermedius membrane after a primary lung cancer resection' [1]. I agree with the authors about the risk of subcarinal lymph node dissection, but the important point must be how this dissection is performed.

I would like to make additional comments about the surgical approach. It is known that in the treatment of bronchopleural fistulas which occur following lobectomy (especially lower lobectomy), tube thoracostomy may be sufficient without any additional surgical management. In this respect, I think 2nd, 3rd and 4th cases should not have been reoperated. Additionally, buttressing of pedicled intercostal muscle, pericardium or omentum for reclosing of the PBIM should be used instead of RML or completion pneumonectomy.

Hospital stay time after the second operation was too long in cases 3 and 4. I think that was because of the decision for a very early reoperation, because fistulas which occur beyond the 10th postoperative day are usually associated with an empyema. Under such circumstances early reoperation is not recommended [2].

References


* The authors of the original paper [1] were invited to reply to this Letter to the Editor but they did not respond.

E-mail address: tallinoks@yahoo.com (T. Altinok).

Letter to the Editor

Re: Traumatic diaphragmatic rupture: look to see

Mohammed W. Khalil a,*, Pradip Sarkar b
a Department of Cardiothoracic Surgery, Castle Hill Hospital, Cottingham, United Kingdom
b Department of Cardiothoracic Surgery, Northern General Hospital, Sheffield, United Kingdom

Received 13 July 2008; accepted 18 August 2008

Keywords: Trauma; Right; Diaphragm

We read with interest the article by Turhan et al. about traumatic diaphragmatic rupture, especially their experience with right-sided ruptures [1]. We did report a case of late presentation of traumatic rupture of the right hemidiaphragm, which is more difficult to detect than left-sided injuries [2]. We cannot but fully agree with their conclusion that a high index of suspicion is of utmost importance for the diagnosis of this condition in any patient with thoracoabdominal injury. However, we would like to emphasise that this is even moreso in suspected right-sided injuries, when early diagnosis is difficult. The chest X-ray could be normal or show only slight elevation of the right hemidiaphragm, as was in our case. Magnetic resonance imaging has been shown to be very useful in establishing the diagnosis because of its capability of directly acquiring coronal and sagittal images allowing evaluation of the entire diaphragm. The disadvantage is that it cannot be easily carried out in an emergency situation, when helical CT remains the modality of choice [3].

We would also like to add that the same high index of suspicion should be held when dealing with post trauma patients who complain of persistent right-sided chest discomfort for many weeks post trauma. Diagnosis can remain elusive. In fact, in our case where the discomfort persisted for up to twenty-one weeks post trauma, even helical CT scan was only suggestive and confirmation was only achieved at operation, at which the diaphragmatic tear was repaired via the transthoracic approach. A persistently elevated right hemidiaphragm on routine radiography must arouse suspicion and lead to more investigations to rule out the condition.

References

**Letters to the Editor / European Journal of Cardio-thoracic Surgery 34 (2008) 1126—1128**

**Reply to the Letter to the Editor**

**Reply to Khalil and Sarkar**

Kutsal Turhana,*, Ozer Makayb, Ozgur Firatb, Ozgur Samancilara

*a Ege University, Faculty of Medicine, Department of Thoracic Surgery, Izmir, Turkey
b Ege University, Faculty of Medicine, Department of General Surgery, Izmir, Turkey

Received 12 August 2008; accepted 18 August 2008

Keywords: Thoracoabdominal trauma; Diaphragmatic injury; Diagnosis

We appreciate the comments of Khalil and Sarkar [1] that they made concerning our paper about traumatic diaphragmatic rupture [2]. We also appreciate the fact that they mentioned the difficulties in the early diagnosis of right-sided diaphragmatic injuries. Meanwhile, we did not understand why they do not agree with our conclusion that a high index of suspicion is of utmost importance for the diagnosis of these patients, since they mentioned that a persistently elevated right hemidiaphragm on routine X-ray must arouse suspicion. Clearly, we reported 11 patients with right-sided injury where 2 of them had late diagnosis. Although the major complaint of these two patients was dyspnea, we agree with Khalil and Sarkar that a high index of suspicion should also be held when dealing with post-trauma patients who complain of persistent right-sided chest discomfort after trauma.

Furthermore, in our paper, we emphasized the sensitivities of radiological investigations, where a chest X-ray reached 17% sensitivity, while this rose to 50% with a CT in right-sided injuries. In other words, chest X-ray can be normal in such cases. Certainly, diagnosis can be elusive, as we stated. There are reviews questioning the role of each imaging method [3]. Shanmuganathan et al. highlighted that if the chest radiography is indeterminate, spiral computed tomography with thin sections and reformatted images is the next study of choice and magnetic resonance imaging is only used to evaluate the diaphragm for patients with clinical suspicion but an indeterminate diagnosis after chest radiography and spiral CT [4].

Herein, it is stated that detection of diaphragmatic injuries has improved with helical CT and should further improve with multisection CT for more accurate analysis of the diaphragm.

**References**


* Corresponding author. Tel.: +90 232 3904919; fax: +90 232 3904681. E-mail address: kutsal.turhan@ege.edu.tr (K. Turhan).

Doi: 10.1016/j.ejcts.2008.08.010

---

**Letter to the Editor**

**Simplified modified reinforced sternal closure**

Khalid Al Ebrahim*

Department of Cardiac Surgery, University Hospital, Jeddah 80215, Saudi Arabia

Received 11 July 2008; accepted 22 July 2008; Available online 29 August 2008

Keywords: Reinforced sternal closure; Sternal

I read with interest the article by Schimmer and co-workers [1] about sternal closure techniques and postoperative sternal wound complications in elderly patients. Initially in my practice I tried the Robiscek technique for secondary closure, post dehiscence or mediastinitis. The Robiscek is still complex and requires two extra longitudinal wires, weaving in and out through all intercostal spaces, which causes more bleeding because of multiple punctures in the sternum and surrounding tissues in addition to the extra heavy metal net. I found those patients have slow healing and considerable post healing chest wall pain, most probably due to steel irritation. Later on, I applied the primary simplified reinforced sternal closure [2] in all patients expected to have postoperative healing problems and since implementation of this concept, all sternal complications decreased dramatically. Elderly, female, osteoporotics, faulty oblique or paramedian sternotomy and improper closure are the most important factors contributing to mechanical sternal instability, which may lead to malunion, dehiscence, infection and mediastinitis. This situation becomes more complicated in tracheostomy and valve replacement patients and ends up with a major morbidity or even mortality.

This technique utilizes a single longitudinal wire on each side with only two sternal punctures at the lower and upper parts of the sternum surrounded by the conventional transverse or figure-of-eight wires. This provides a really solid and stable sternum, which is the most important prerequisite to avoid sternal complications.

I found this way of closure is simple, efficient and less traumatic to the sternum.

* Corresponding author. Tel.: +44 114 2715526; fax: +44 114 2610350. E-mail address: wesam@doctor.com (M.W. Khalil).

Doi: 10.1016/j.ejcts.2008.08.013

---

---