

HOSTED BY



Contents lists available at ScienceDirect

Egyptian Journal of Chest Diseases and Tuberculosis

journal homepage: www.sciencedirect.com

Six years experience of medical thoracoscopy at Al Hussein University Hospital

Khaled M. Halima, Sameh F. Makled*, Safwat M. Ali, Ahmed H. Wahba, Ahmed A. Kabil

Chest Department, Faculty of Medicine, Al-Azhar University, Cairo, Egypt

ARTICLE INFO

Article history:

Received 2 November 2016

Accepted 7 December 2016

Available online xxxx

Keywords:

Thoracoscopy
Pleural effusion
Malignant PH
CRP
ANA
Cholesterol

ABSTRACT

Background: Pleural effusion, pneumothorax, and pleural thickening are frequently encountered in pulmonary practice. Although the radiographic detection of pleural abnormalities may be obvious, determination of a specific diagnosis can present a challenge. Computed axial tomographic (CT) and ultrasound scans of the thorax and bronchoscopy with transbronchial biopsies may be helpful in selected circumstances, but the diagnostic yield for pleural disease is disappointingly low. Thoracoscopy (or pleuroscopy) involves passage of an endoscope through the chest wall and offers the clinician a “window” for direct visualization and collection of samples from the pleura. It is a valuable diagnostic procedure and, in some cases, can also provide an opportunity for treatment.

Aim of the study: This study was carried out to analyze our six years experience of medical thoracoscopy in the management of undiagnosed pleural effusion at Al Hussein University Hospital.

Methods: The study conducted on 170 patients with undiagnosed pleural effusion, 100 males and 70 females with age ranging between 22 and 85 (mean age 56 ± 12.48). The thoracoscopic findings of the pleura were nodules in 109 patients (64.12%), adhesions in 32 patients (18.82%), masses in 7 patients (4.12%), collections of pus in 3 patients (1.76%), foreign body (central venous line in 1 patient (0.59%) and nonspecific findings in 18 (10.59%). In this study thoracoscopy was successful for giving final diagnosis in 161 patients (94.7%) from total 170 patients.

Results: The thoracoscopic findings of the pleura were nodules in 109 patients (64.12%), adhesions in 32 patients (18.82%), masses in 7 patients (4.12%), collections of pus in 3 patients (1.76%), foreign body (central venous line in 1 patient (0.59%) and nonspecific findings in 18 (10.59%). Thoracoscopy was successful for giving final diagnosis in 161 patients (94.7%) from total 170 patients. malignancies reported in 83.53% of patients, benign lesions reported in 11.18% of patients, non specific pleurisy in 9 patients (5.29%) TB in 16 patients (9.41%) and empyema in 3 patients (1.77%). The most common pathological malignant type was malignant pleural mesothelioma in 84 patients (49.41%) followed by adenocarcinoma in 44 patients (25.88%), squamous cell carcinoma in 2 patients (1.18%), small cell carcinoma 1 patient (0.59%), malignant melanoma in 1 patient (0.59%) and thymoma in 1 patient (0.59%). we found no post-thoracoscopic complications in 159 out of 170 patients (93.52%), whereas minor complications occurred only in 11 out of 170 patients (6.48%); 5/170 patients (2.94%) developed surgical emphysema, 3/170 patients (1.77%) developed empyema, and 3/170 patient (1.77%) developed air leak.

Conclusion: Medical thoracoscopy is an easy procedure and an excellent diagnostic procedure for pleural effusion of uncertain etiology. It has low complication rate even in settings where the procedure is just started. It should be included in the armamentarium of procedures for management of pleural effusion.

© 2016 Production and hosting by Elsevier B.V. on behalf of The Egyptian Society of Chest Diseases and Tuberculosis. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

Pleural effusion, pneumothorax, and pleural thickening are frequently encountered in pulmonary practice. Although the radiographic detection of pleural abnormalities may be obvious, determination of a specific diagnosis can present a challenge. Computed axial tomographic (CT) and ultrasound scans of the tho-

Peer review under responsibility of The Egyptian Society of Chest Diseases and Tuberculosis.

* Corresponding author.

E-mail address: sameh_makled@yahoo.com (S.F. Makled).

<http://dx.doi.org/10.1016/j.ejcdt.2016.12.002>

0422-7638/© 2016 Production and hosting by Elsevier B.V. on behalf of The Egyptian Society of Chest Diseases and Tuberculosis.

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Please cite this article in press as: K.M. Halima et al., Six years experience of medical thoracoscopy at Al Hussein University Hospital, Egypt. J. Chest Dis. Tuberc. (2016), <http://dx.doi.org/10.1016/j.ejcdt.2016.12.002>

rax and bronchoscopy with transbronchial biopsies may be helpful in selected circumstances, but the diagnostic yield for pleural disease is disappointingly low [1,2]. Percutaneous access to the pleural space is diagnostically useful and relatively simple; however, approximately 25% of pleural abnormalities remain undiagnosed after thoracentesis and/or closed pleural biopsies [3–6]. CT-guided Abrams needle biopsy is a reasonable initial diagnostic procedure if pleural thickening is the main abnormality [7]. Thoracoscopy (or pleuroscopy) involves passage of an endoscope through the chest wall and offers the clinician a “window” for direct visualization and collection of samples from the pleura. It is a valuable diagnostic procedure and, in some cases, can also provide an opportunity for treatment [8].

Aim of the work

This study was carried out to analyze our six years experience of medical thoracoscopy in the management of undiagnosed pleural effusion at Al Hussein University Hospital.

Materials and methods

This study was conducted in the Department of Pulmonary Medicine at the Al-Hussien University Hospital; Al-Azhar University from June 2010 to June 2016. All patients who underwent thoracoscopy during this period (170 patients) were included in the study. Thoracoscopy was performed for diagnosis of exudative pleural effusions, which could not be detected by pleural fluid analyses using the routine biochemical, cytological, microbiological investigations and closed pleural biopsy. All patients underwent detailed clinical evaluation with history, clinical examination and radiological examination (CXR, CT). All the patients underwent the routine investigations including complete blood count and renal function tests. Prothrombin time, international normalized ratio, and platelet counts were done to rule out any bleeding tendency. Written informed consent was obtained from all the patients.

Thoracoscopy procedure

Patients were kept fasting for six hours prior to the procedure. Lateral decubitus position, with the side of pleural effusion facing upwards, was used for the procedure. Continuous monitoring of blood pressure and pulse rate was ensured during the procedure. Thoracoscopy was conducted under conscious sedation using intravenous aliquots of Midazolam along with local anesthesia (2% solution of lidocaine). Skin was cleaned with antiseptic solution and draped with a sterilized cloth. In most of the cases, mid-axillary line was used for entry of thoracoscope, but in some patients, anterior or posterior axillary line were chosen based on clinical examination and radiological findings of loculation of fluid. A 1–2 cm skin incision was made, followed by a blunt dissection of intercostal muscles. A trocar with inner diameter of 8 mm was inserted through the chest wall followed by the insertion of the cannula through which the thoracoscope was introduced into the pleural cavity. Rigid thoracoscope by Karl Storz (model No. 1571721) was used. Pleural fluid was sucked out with suction catheter introduced through the working channel of thoracoscope. After achieving clear visualization, the pleural cavity was thoroughly inspected starting from diaphragmatic pleura as the first guide to the position of scope (because diaphragm movement helps with its easy identification). Adhesions, if present, were gently broken mechanically by moving thoracoscope or biopsy forceps through them. Any abnormal looking area was biopsied with the help of forceps introduced via working channel. Following the

procedure, thoracoscope and cannula were removed and under water sealed drain was inserted. The demographic details like age, sex, smoking status, site of effusion, visual appearances on thoracoscopy, pathological diagnostic details were recorded. It was a cross-sectional study.

Results

This study included 170 patients with age ranging 22–85 years and mean 56 ± 12.48 . Males were 100 patients (58.82%) with age ranging 24–85 and mean 56.4 ± 13.34 , females were 70 patients (41.18%) with age ranging 22–79 and mean 55.9 ± 11.18 (Tables 1 and 2).

Discussion

In the absence of thoracoscopy, pleural fluid cytology and closed pleural biopsy are the two commonly applied procedures for the diagnosis of pleural effusion. The diagnostic yield of cytology in malignant pleural effusion varies between 30% and 80% [9]. In pleural effusions undiagnosed by thoracentesis, closed pleural biopsy increases the yield by about 10% and 40% in malignant and tuberculous pleural effusions, respectively. However, the diagnostic yield of thoracoscopy is about 93% in both malignant and tuberculous pleural effusions [10–11].

Thoracoscopy is an excellent diagnostic procedure. The added advantage in thoracoscopy is the direct visualization of biopsied areas, which can increase the diagnostic yield [10].

The present study included 170 patients with age ranging 22–85 years and mean 56 ± 12.48 . Males were 100 patients (58.82%) with age ranging 24–85 and mean 56.4 ± 13.34 , females were 70 patients (41.18%) with age ranging 22–79 and mean 55.9 ± 11.18 (Tables 1 and 2).

This study showed that most of patients (51.8%) living at Shoubra El-Kheima (61 patients (35.9%) and Helwan (27 patients (15.9%)), other patients from different sites (Table 3).

From this study we found that 89 patients (52.35%) presented with right side pleural effusion, 78 patients (45.89%) with left side pleural effusion and 3 patients (1.76%) with bilateral pleural effusion (Table 4).

Table 1
Distribution of patients according to age.

Age/years	Range	Mean \pm SD
Male	24–85	56.4 ± 13.34
Female	22–79	55.9 ± 11.18
Total	22–85	56 ± 12.48

Table 2
Distribution of patients according to sex.

Sex	Number	Percentage (%)
Male	100	58.82
Female	70	41.18
Total	170	100

Table 3
Distribution of patients according to residence.

Residence	Number	Percentage (%)
Shoubra El-Khima	61	35.9
Helwan	27	15.9
Other places	82	48.2
Total	170	100

Download English Version:

<https://daneshyari.com/en/article/8745368>

Download Persian Version:

<https://daneshyari.com/article/8745368>

[Daneshyari.com](https://daneshyari.com)