

The Egyptian Society of Chest Diseases and Tuberculosis
Egyptian Journal of Chest Diseases and Tuberculosis

www.elsevier.com/locate/ejcdt
www.sciencedirect.com



ORIGINAL ARTICLE

Diagnostic yield of medical thoracoscopy in cases of undiagnosed pleural effusion in Kobri El-Kobba Military Hospital



Laila A. Helala ^{a,*}, Gehan M. El-Assal ^a, Ayman A. Farghally ^b,
Marwa M. Abd El Rady ^a

^a Department of Chest Diseases, Faculty of Medicine, Ain Shams University, Egypt

^b Kobri El-Kobba Military Hospital, Egypt

Received 17 March 2014; accepted 6 April 2014

Available online 10 May 2014

KEYWORDS

Pleural effusion;
Thoracoscopy;
High diagnostic yield

Abstract *Background:* Recurrent and persistent pleural exudates are common in clinical practice, and in a large number of patients, thoracocentesis and blind pleural biopsy procedures do not provide a definitive diagnosis. In the Western world, the majority of these exudates are malignant. Thoracoscopy today remains the gold standard technique in providing diagnosis and management in these cases.

Objectives: Diagnostic yield of medical thoracoscopy was evaluated in cases of undiagnosed pleural effusion.

Patients and methods: Semi flexible medical thoracoscopy was done for 40 patients in the period between March 2010 and October 2012 in Kobri El-Kobba Military chest Hospital through double points of entry.

Results: Medical thoracoscopy gave a definitive diagnosis in 38 out of 40 patients with diagnostic yield 95%. Malignancy was diagnosed in 28 patients (70%), one patient was diagnosed as empyema (2.5%), tuberculosis was found in 9 patients (22.5%), and it was non diagnostic in 2 patients (5%). The post-thoracoscopic complications in the studied group have occurred only in 4 patients (10%).

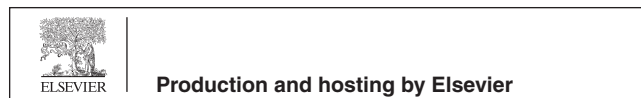
Conclusion: Medical thoracoscopy is a valuable tool in the diagnosis of undiagnosed exudative pleural effusion. It is a simple and safe method with high diagnostic yield and with low complication rates.

© 2014 Production and hosting by Elsevier B.V. on behalf of The Egyptian Society of Chest Diseases and Tuberculosis. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

* Corresponding author.

E-mail address: laila.helala@hotmail.com (L.A. Helala).

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



Introduction

Undiagnosed pleural effusions remain a diagnostic challenge for pulmonologists. In a patient with an undiagnosed pleural effusion, the first question to answer is whether the fluid is an exudate or a transudate [1].

Investigation of a pleural effusion evident on chest radiographs should follow a stepwise approach to diagnosis. Diagnosis begins with the clinical history, physical examination, and chest radiography and is followed by thoracentesis when appropriate [2].

Recurrent and persistent pleural exudates are common in clinical practice, and in a large number of patients, thoracentesis and blind pleural biopsy procedures do not provide a definitive diagnosis. In the Western world, the majority of these exudates are malignant. Thoracoscopy today remains the gold standard technique in providing diagnosis and management in these cases [3].

Thoracoscopy is a minimally invasive procedure that allows visualization of the pleural space and intrathoracic structures. It enables the taking of pleural biopsies under direct vision, therapeutic drainage of effusions and pleurodesis in one sitting [4].

Pleural effusion of unknown origin remains the commonest indication of pleuroscopy and is considered to be one of the techniques with the highest diagnostic yield in "aspiration cytology negative exudative effusions" from the recent British Guidelines, with an efficacy almost comparable to video-assisted thoracoscopic surgery (VATS) [5].

Medical thoracoscopy should be considered in patients with undiagnosed pleural effusions, particularly those lymphocytic exudative effusions where TB and malignant pleural effusion are clinical possibilities and initial pleural fluid analysis is inconclusive [6].

Thoracoscopy is the gold standard for the diagnosis and treatment of pleural diseases. Its diagnostic yield is 95% in patients with malignant pleural disease, with approximately 90% successful pleurodesis for malignant pleural effusion and 95% for pneumothorax [7].

In patients with suspected tuberculous pleurisy, thoracoscopic pleural biopsy under local anesthesia should be actively performed, because the technique has a high diagnostic rate, and can be easily and safely performed [8].

The semirigid thoracoscope achieves a diagnostic yield similar to that of the conventional rigid instrument despite the smaller biopsy size. Both instruments remain valuable in the evaluation and management of pleural disease [9].

Thoracoscopy with flex-rigid thoracoscope is a useful diagnostic tool in the evaluation of pleural effusions with negative blind pleural biopsy and cytology [10].

Aim of the work

The aim of this study was to detect the diagnostic yield of medical thoracoscopy in the diagnosis of cases of exudative pleural effusions of unidentified etiology.

Patients & Methods

Forty patients with undiagnosed exudative pleural effusion after being evaluated by thoracentesis and closed pleural biopsy were selected from those attending the chest outpatient clinic and chest department at Kobri El-Kobba Military Hospital.

Exclusion criteria for the patient:

The following patients were excluded from the study:

1. Patients with transudative pleural effusion, according to Light's criteria.

2. Patients whose initial pleural fluid examination through thoracentesis or closed pleural biopsy could reach a definitive histopathological diagnosis.
3. Patients who are not fit for performing thoracoscopy as in the following cases:
 - Patients with severe uncorrected hypoxemia despite continuous oxygen administration.
 - Patients who could not withstand the lateral decubitus for a period long enough to perform the thoracoscopy.
 - Patients with unstable cardiovascular or haemodynamic status.
 - Patients with coagulation defects. At least, the prothrombin concentration should be greater than 60%, and the platelet count should be greater than 60,000/mm³.
4. Absolute contraindications as in the following conditions:
 - Patients in whom the pleural space was judged to be inaccessible easily, those who had their pleural space obliterated by fibrous tissue or those who were suspected of having multiloculated effusions.
 - Patients with very thickened pleural as demonstrated by CT scanning as it will impair the expansion of the underlying lung following the procedure.
 - Patients with honey comb lung, pulmonary arteriovenous aneurysms, suspected hydatid cysts and highly vascularized pulmonary lesions.

All Patients were subjected to the following:

1. Full history taking.
2. Clinical examination.
3. Investigations:
 - Full routine laboratory investigations: Complete blood picture, liver and kidney functions and bleeding profile. (Prothrombin time and concentration).
 - Sputum smears examinations for the presence of Acid-Fast Bacilli (AFB) on three successive days.
 - Tuberculin skin testing using five tuberculin units (TU) injected intradermally and interpreted after 48–72 h.
 - Radiological examination, through plain chest X-ray postero-anterior and lateral views, as well as CT scanning of the chest.
 - Thoracentesis: Pleural fluid aspirated from the patient was sent for full chemical, bacteriological and cytological examination.
 - Closed pleural biopsy using Abram's needle biopsy: the samples obtained were placed in formalin and normal saline. They were examined histopathologically.
 - Thoracoscopic examination of the pleural space using a fiberoptic thoracoscopy (Fig. 1).

Technique

Two punctures technique was the method used in the present study. A 2 cm stab incision was made, digital palpation determined the presence of adhesions and bleeders from the wound were checked. If none was present an 11 mms trocar was

Download English Version:

<https://daneshyari.com/en/article/3400185>

Download Persian Version:

<https://daneshyari.com/article/3400185>

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