

HOSTED BY



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

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



Video-assisted medical thoracoscopic (VAMT) lung biopsy in the diagnosis of diffuse pulmonary infiltrates

Tamer Elhadidy *, Mohammed Ibrahim, Fatma El-husseiny Moustafa, Aml fathy, Amina Abd El- Maksoud

Faculty of Medicine, Mansoura University, Egypt

Received 24 July 2016; accepted 30 August 2016

KEYWORDS

Medical thoracoscopy;
 Bilateral pulmonary infiltrate;
 Lung biopsy

Abstract *Introduction:* Since cases presenting with diffuse pulmonary infiltrates represent a big sector in pulmonary practice and their diagnosis may be hard passing in many steps and may need a tissue evidence for sure diagnosis by lung sampling that usually obtained by transbronchial lung biopsy (TBLB) or surgery either open or by VATS (video assisted thoracoscopic surgery), but however TBLB usually offer small sized unrepresentable biopsies and surgical options are much more invasive. We investigated lung sampling by standard medical thoracoscopy as a tool for obtaining sizable biopsies and being less invasive than surgical options with a primary research question, is it safe and effective?

Methods: All cases in this study were subjected to thoracoscopic lung biopsy only after failed diagnosis by less invasive diagnostic facility (with data obtained from clinical examination, full history, laboratory diagnosis, spirometry, Bronchoalveolar lavage and transbronchial lung biopsy (TBLB).

Results: (18) patients included in this study. Medical thoracoscopy had diagnosed all the cases with a diagnostic yield of 100%. No major complications.

Conclusion: we concluded that lung sampling can be performed safely by VAMT (video assisted medical thoracoscopy) with a good diagnostic yield in cases of diffuse lung infiltrates of unknown origin and represent an excellent alternative for VATS and open biopsy.

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

Introduction

Many different diseases may present with diffuse lung shadowing on chest radiography. including infection, neoplasm, pulmonary edema, hemorrhage, environmental and occupational lung diseases, drug-induced lung disease, aspiration pneumonia, many forms of interstitial lung diseases

* Corresponding author.

E-mail address: hadidy1980@yahoo.com (T. Elhadidy).

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

<http://dx.doi.org/10.1016/j.ejcdt.2016.08.016>

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

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

(ILDs), and others. “Diffuse” implies involvement of all lobes of both lungs, but the process need not affect all lobes or all lung regions uniformly [1]. A diagnosis requires a comprehensive evaluation in the form of the following: (1) A methodical history to include demographics, family history, occupational and environmental exposures; (2) physical examination; (3) chest radiographs; (4) high resolution computed tomographic (CT) scans; (5) blood tests; (6) fiberoptic bronchoscopy with bronchoalveolar lavage or transbronchial lung biopsies (selected patients); (7) surgical lung biopsy (in selected cases) [2]. The diagnosing potential of TBLB is also unspectacular for many cases of ILD. A specific diagnosis is achieved in the range 29–79% of reported cases referred for the TBLB [3]. So for this sizeable group of patients, the only option remaining is for a Surgical Lung Biopsy (SLB). However, such an operation is not without its risks to the patient; indeed SLB does carry a slight risk of mortality. In recent years Video-assisted Thoracoscopic Surgery (VATS) has replaced the older, more invasive method, of performing a minithoracotomy in these patients. Forceps lung biopsy during medical thoracoscopy under local anesthesia has been used for many years by pulmonologists and has been described frequently as an integral technique of medical thoracoscopy [4]. So, the aim of this study was to evaluate the diagnostic yield and safety of the thoracoscopic lung biopsy by standard medical thoracoscopy in the diagnosis of diffuse pulmonary infiltrates.

Methods

Prospective interventional study (during 2014) included (18) patients (limited number due to limited involved population), (with mean age 45.56). 66.7% were females. Admitted to Mansoura university chest medicine department presented with diffuse pulmonary infiltrates on chest radiograph. All patients were diagnosed by lung sampling via medical thoracoscopy after failed diagnosis by less invasive diagnostic facility i.e. in whom the multidisciplinary integration of clinical and radiological data, with the addition of bronchoscopic lavage and transbronchial lung biopsy data, is insufficient to yield a con-

fidant diagnosis. During the period of our study fifty patients were admitted with diffuse lung infiltrates however only eighteen patients were in need for thoracoscopic lung biopsy after failed diagnosis by less invasive facility. Ineligibility criteria included medical unfitness to the procedure beside the availability of other less invasive diagnostic method. Medical thoracoscopy was done using 11 mm single trocar thoracoscope under local anesthetic medications and conscious sedation and with induction of pneumothorax using verres needle. After traditional thoracoscopy technique lung biopsy was taken with the aid of coagulation forceps set at 60–100 W, so it coagulates and seals the cut surface. Samples were taken from healthy as well as abnormal areas (identification based on chest radiography as well as any macroscopic abnormalities encountered during thoracoscopy with avoidance of lung sampling near fissures or bullae). After lung biopsy, a chest tube is inserted and left in place until the air leak stops.

Statistical analysis

Data were analyzed using SPSS (Statistical Package for Social Sciences) version 15. Qualitative data were presented as number and percent. Pearson’s correlation coefficient was used to test correlation between variables. $P < 0.05$ was considered to be statistically significant.

Results

Convenient biopsy specimens were obtained in all patients – Number of biopsies taken in each patient ranges from (2) to (6) – mean(2.93 ± 1.16 SD) – Duration of ICT ranged from (1) day to (7) days mean (3.11 ± 1.68 SD). Diagnostic yield was 100%. There was no major complication (no respiratory failure requiring ICU admission and no mortality). There was minor bleeding at biopsy site in 50% while surgical emphysema in 27.8% and infection (empyema) in one case. As a final diagnosis (7) cases were diagnosed as Usual interstitial pneumonia, (4) cases were diagnosed as Adenocarcinoma (Fig. 1a and b), (2) cases were diagnosed as Non specific inter-

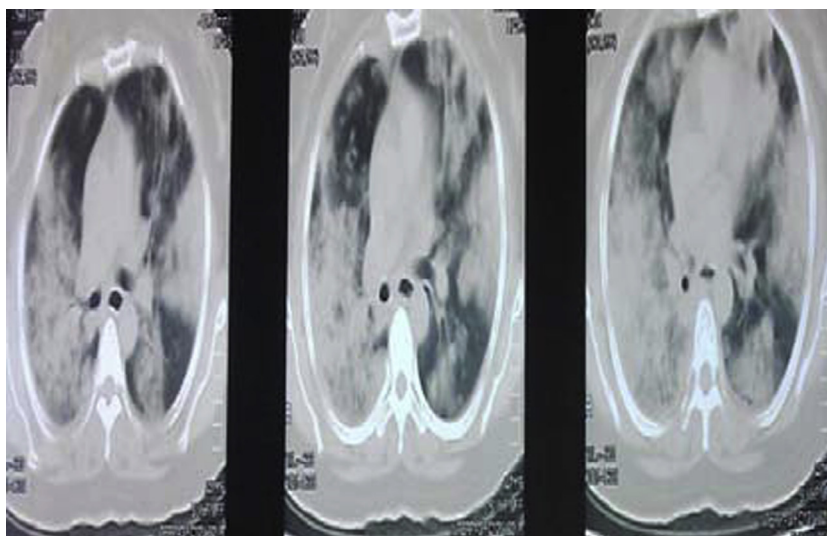


Figure 1a HRCT (high resolution computed tomography) chest showing bilateral consolidation for 50 y old female who presented with exertional dyspnea for 4 months and bronchorrea. Sputum cytology and bronchoscopy with transbronchial lung biopsy were not diagnostic.

Download English Version:

<https://daneshyari.com/en/article/8745360>

Download Persian Version:

<https://daneshyari.com/article/8745360>

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