costodiaphragmatic recess in the case of both mild PE and abundant PE. Our study has shown that this calculation can be done directly at the bedside without any radiation risk and it can improve the efficacy and safety of the decision making regarding patients with PE before thoracentesis.

Conclusions

A PSID is a useful tool that may integrate and complete the physical examination and may also provide additional information to chest X-ray for the clinical management of patients with suspected PE. The PSID-derived estimates regarding the nature and quantity of PE may be applied in the decision making of thoracentesis, and the use of PSID increases the effectiveness and safety of the procedure.

Conflict of interest: none declared.

REFERENCES


eComment. A pocket-sized imaging device during a minimally invasive pleural biopsy

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We read with great interest the innovative work by Lisi et al. regarding the value of a pocket-sized imaging device (PSID) for the bedside diagnosis of pleural effusions and ultrasound-guided thoracentesis [1]. We think that the use of PSIDs could be extended to minimally invasive pleural biopsies, if the diagnosis by simple thoracentesis is not sufficient. Apart from the standard methods of pleural biopsy, we have recently published a simple method of simultaneous chest tube drainage and minimally invasive pleural biopsy with the use of the mediastinoscope [2].

The technique is simple and is carried out under local anaesthesia. It is performed with the patient in either the supine or the lateral position. During the routine process of chest tube insertion, after the dissection of the intercostal muscles, a standard mediastinoscope is inserted to inspect the outer aspect of the adjacent parietal pleura. The parietal pleura can be detached from the chest wall by a small gauze in the forceps of the mediastinoscopy set. It can alternatively be performed blindly with a finger, or both techniques can be used. Then, biopsies of the adjacent parietal pleura are taken by using the biopsy forceps from the
mediastinoscopy set. In this way, full-thickness specimens of the parietal pleura can be taken. An inspection of the pleural cavity may sometimes be possible, if the patient’s condition permits it. Pleural specimens are sent for biopsy, frozen section biopsy, and any other appropriate examination cultures (B. Koch, Gram stain, etc). The thoracic drainage tube is then inserted as usual [2].

Advantages to our technique are: 1) it is a simple and rapid procedure that is well-tolerated by the patient; 2) it can usually be performed in both high-risk patients and in elderly patients, under local anaesthesia, and with minimal risk; 3) it can normally be used without the assistance of an anaesthetist; 4) it can be performed as an outpatient procedure or a one-day procedure; 5) it can be performed using the standard equipment of a thoracic surgery unit; 6) the main advantage is that visible pleural biopsy and haemostasis take place, in contrast to the blind biopsy of other similar minimally invasive techniques [2]. In closed pleural biopsy techniques, such as the Abrams or the Tru-Cut technique, pleural tissue is not always present in the specimen [3]. In contrast, with the above-mentioned technique, there was always pleura tissue in the specimen, and there were no complications [2].

In our technique, a suitable entry point can be chosen with CT and/or ultrasound guidance [2]. A PSID could be used and add great convenience to our technique in order to have easier and quicker application in the outpatient department. We would like to propose a combination of the use of a PSID and our minimally invasive pleural biopsy with the use of the mediastinoscope to expand the diagnostic possibilities in the investigation of pleural effusions with minimal risk for the patient.

Conflict of interest: none declared

References