

Flex-rigid pleuroscopy under local anesthesia in patients with radiological dry pleural dissemination

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Abstract

Background

A medical thoracoscopy using flex-rigid pleuroscope under local anesthesia is a recent diagnostic procedure for malignant pleural metastasis. Although almost of the previous studies have shown a utility especially in wet pleural dissemination, the feasibility of flex-rigid pleuroscopy in patients with suspicious for dry pleural dissemination (DPD) has not known well.

Purpose

We assessed the utility and safety of the flex-rigid pleuroscopy under local anesthesia for patients with suspicious for DPD.

Methods

56 patients underwent flex-rigid pleuroscopy at National Cancer Center Hospital from October 2011 to September 2013. Out of 56 patients, 16 patients who have suspicious DPD finding which asymmetric pleural thickening or pleural nodules without pleural effusion on chest tomography scan (Dry group) were retrospectively reviewed pleuroscopic parameters, and then compared to remained patients with pleural effusion (Wet group).

Results

The patients were 8 men and 8 women, with median age of 61 years (range, 48-74 years). The definitive diagnoses were as follow; 10 adenocarcinoma, 2 mesothelioma, and 3 chronic inflammation. Diagnostic accuracy was 93.8% (15/ 16). Only 2 minor complications were observed; 1 chest pain and 1 transient hypoxia. No major complications including pneumothorax were observed. Regarding complications, operating time, and accuracy, there were no statistically differences between in two groups. The duration of placing chest tube after procedure in the Dry group was shorter than that with Wet group (2.31 day versus 5.89 day, $P < 0.001$).

Conclusions

The flex-rigid pleuroscopy under local anesthesia is a rapid, safe, and well-tolerated procedure for diagnosing DPD histopathologically. A further preoperative chest wall assessment of adhesion using an ultrasound should be considered to prevent lung parenchyma injury.

Table 1. Clinical characteristics and pleuroscopic findings in the Dry group

No.	Age/sex/side	Purpose	Definitive diagnosis	Instrument	Pleural adhesion	Complications	Extubation
1	61/M/Lt	Staging	Lung adenocarcinoma	SFF	0	No	1POD
2	62/M/Rt	Diagnosis/staging	Lung adenocarcinoma	SFF	1	Chest pain	1POD
3	54/M/Rt	Diagnosis/staging	Desmoplastic MPM	SFF/ITknife	1	No	1POD
4	69/F/Lt	Diagnosis/staging	Lung adenocarcinoma	SFF	0	No	1POD
5	58/F/Rt	Diagnosis/staging	Lung adenocarcinoma	SFF	0	No	1POD
6	74/F/Rt	Diagnosis/staging	Lung adenocarcinoma	SFF	0	No	1POD
7	59/M/Rt	Rebiopsy	Lung adenocarcinoma	SFF	0	No	9POD
8	63/M/Lt	Rebiopsy	Lung adenocarcinoma	SFF	0	Hypoxia	8POD
9	63/F/Lt	Diagnosis/staging	Lung adenocarcinoma	SFF	0	No	5POD
10	48/M/Lt	Diagnosis	Chronic inflammation	SFF	1	No	1POD
11	68/M/Lt	Diagnosis	MPM	SFF/IT knife	0	No	1POD
12	74/M/Lt	Diagnosis	Chronic inflammation	SFF/IT knife	0	No	2POD
13	58/M/Lt	Diagnosis/staging	Chronic inflammation	SFF	0	No	1POD
14	48/M/Rt	Staging	Lung adenocarcinoma	SFF	0	No	1POD
15	58/F/Rt	Diagnosis	Suspicious for MPM	SFF	0	No	1POD
16	79/F/Rt	Diagnosis/staging	Lung adenocarcinoma	SFF	0	No	2POD

Abbreviations: M, male; F, female; Lt, left; Rt, right; MPM, malignant mesothelioma; SFF, standard flexible forceps; IT knife, insulated-tip diathermic knife; POD, postoperative day.