

*Letter to
the Editor*

VATS and Intrapleural Fibrinolytic Therapy for Parapneumonic Empyema

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Keywords: localized pleural fluid, intrapleural fibrinolytic therapy, parapneumonic empyema, video-assisted thoracic surgery

With great interest, we read the article by Samancilar et al. on the efficacy of video-assisted thoracoscopic (VATS) and intrapleural fibrinolytic (IPFib) therapy in parapneumonic empyema treatment (February issue, Ann Thorac Cardiovasc Surg, 2018).¹⁾ We would like to ask four questions. First, the authors described the post-operative length of hospital stay.¹⁾ However, there is no description of required condition to discharge hospital. We suppose that disappearance of drainage and removal of chest tube must be required before the discharge of hospital. However, one patient discharged with Heimlich valve.¹⁾ Please let us know the condition and timing. Second, the authors reported that the total blood count and coagulation parameters of the patients were checked before every IPFib therapy.¹⁾ Based on your experience, we would like to hear from the authors what are other tests than them to be done before performing of VATS deloculation (VATS-D) and IPFib? Is there a need to investigate the properties of pleural fluid by exploratory puncture? How about confirming coagulation and

inflammatory reaction? Third, according to the authors, the introduction of fibrinolytic therapy could not be completed in six patients because of hemorrhagic drainage after third or fourth doses.¹⁾ What kind of treatment was necessary for these patients? Fourth, one patient developed pleural thickening in the follow-up period with partial response to treatment and required decortication via thoracotomy.¹⁾ We would like to know when did this complication occur after treatment.

Disclosure Statement

None.

Reference

- 1) Samancilar O, Akçam Tİ, Kaya SO, et al. The efficacy of VATS and intrapleural fibrinolytic therapy in parapneumonic empyema treatment. Ann Thorac Cardiovasc Surg 2018; 24: 19-24.

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Received: April 6, 2018; Accepted: April 17, 2018

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Reply:

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We acknowledge the comments and questions posed by Ohara et al. related to our manuscript. Concerning the questions to be answered;

1. Our basic requirements for discharge are expansion of the lungs, cessation of air drainage, change of fluid drainage to a serous color and fluid drainage of below 200 cc per 24 hours. In our study, one patient who underwent a video-assisted thoracic surgery decortication (VATS-D) was discharged with a Heimlich valve. Despite achieving daily fluid drainage below 200 cc, the patient was fitted with a Heimlich valve system due to minimal expansion deficit and continuing air drainage, and the thoracostomy tube was withdrawn in the following week. The drains of the remaining patients were removed at least 1 day prior to discharge.
2. The use of anticoagulant and antiplatelet drugs was taken into consideration before the patients underwent VATS-D and intrapleural fibrinolytic (IPFib) procedures, and the procedure was delayed for 5–7 days in patients who were on such medications. Additional pathologies that may cause hemorrhage were inquired. In all patients, the international normalized ratio (INR) and mean activated partial thromboplastin time (APTT) were measured. Attempts were made to normalize the values in patients with prolonged bleeding parameters.
3. The four patients whose IPFib procedures had to be terminated prior to the desired effect being achieved were those who were connected to a mechanical ventilator during follow-up in the intensive care unit. Although the results of the blood count and coagulation tests made before the procedure were normal, the procedure was terminated as the drainage took on a hemorrhagic character after repeated procedures. In the other two patients, additional doses were withheld due to the presence of hemoptysis, accompanied by partially hemorrhagic drainage. Hemorrhage stopped after terminating the procedure; drainage was discontinued as the fluid took on a serous character and/or the amount of fluid decreased.
4. One patient in the IPFib group required a thoracotomy and decortication in the following period as lung expansion and drainage could not be achieved. Control visits after discharge are carried out at week 1, day 30, and day 90. During the 3-month control visit, this patient was scheduled for decortication due to continuing loculation and a lack of expansion on thoracic-computed tomography scans.