## Abstract

The Effectiveness And Safety Of Intrapleural Urokinase Combined With Medical Thoracoscopy For Complicated Parapneumonic Effusions And Empyema



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**Objectives:** to assess the effectiveness and safety of intrapleural urokinase combined with Medical Thoracoscopy for Complicated Parapneumonic Effusions（CPE）and Empyema

**METHODS:**We conducted a single-center,prospective Parallel-controlled trial to determine whether intrapleural urokinase combined with Medical Thoracoscopy improve outcome and reduce the need for surgery in patients with Complicated Parapneumonic Effusions （CPE）and Empyema. The study enrolled patients from May 2020 to April 2021. Subjects were allocated into an intrapleural urokinase (UK) group 、Medical Thoracoscopy(MT) group、and normal saline (NS) group 、

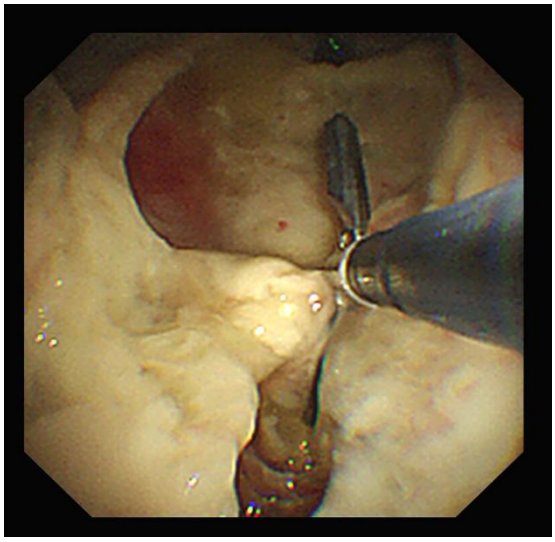
intrapleural urokinase combined with Medical Thoracoscopy (UK+MT) group.The primary outcome was efficacy . Secondary outcomes included and the length of the duration of pleural effusion following any intervention , the need for surgery, and adverse events.

**Results:**

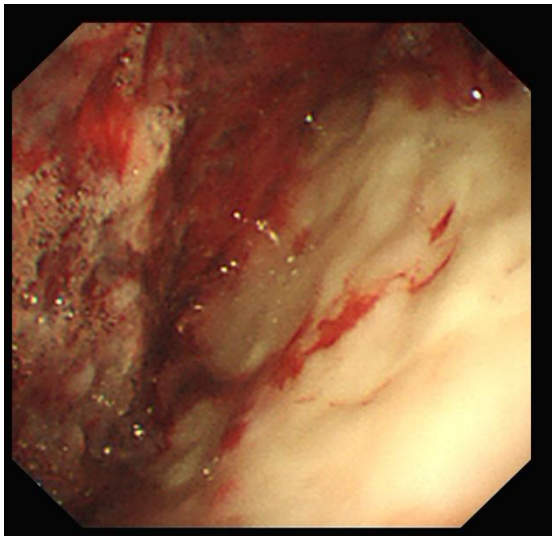
Fourty-two patients with CPE or empyema were allocated to receive NS(12 patients)、MT(20 patients)、UK(5 patients) or UK-MT （5 patients）separately。the efficacy was 5/12（41.6%）for NS group and3/5（60%）for the UK group and15/20（75%）for the MT group and5/5（100%）for the（MT +UK）group，(P<0.01).the mean length of the duration of pleural effusion was（ 22.5+4.2）d for the NS group and（ 13.5 士 2.9）d for the UK group and（11.1 士 1.8）d for the MT group and（10.9士1.5）d for the（ MT +UK）group;(P<0.01). two patients required surgical intervention only in NS group.There was no difference in mortality or adverse events in each group,

**Conclusion:** intrapleural urokinase combined with Medical thoracoscopy for complicated parapneumonic effusion or empyema is efficacy and safe，They may shorten the length of the duration of pleural effusion， reduce the need for surgery and the duration of

the hospital stay in selected patients compared with any therapy separately.



Empyema（Preoperative）



Empyema(Postoperative

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