

**PORT-ACCESS THORACOSCOPIC DEBRIDEMENT UNDER LOCAL ANESTHESIA FOR EMPYEMA(PARAPNEUMONIC EFFUSION)**Top Author: **Hirohisa Kato***Second Department of Surgery, Faculty of Medicine, Yamagata University  
Japan***Area and Category(at submission):**[WCBIP] Thoracoscopic lung surgery**Presentation Preference:** Either**Case Report:** YES

**Background:** Recently, thoracoscopic debridement has played a major role in managing the intermediate, fibrinopurulent phase of empyema. Usually, thoracoscopic debridement has been performed with three ports under general anesthesia. However, it may be difficult to decide to use general anesthesia, which is associated with a risk of pulmonary dysfunction, in high-risk patients. We present our technique of two-port-access thoracoscopic debridement under local anesthesia for treating a high-risk patient with empyema.

**Case report:** A 69-year-old man was admitted to our hospital with pleural effusion and a thin peel on the left pleural cavity that was suspicious for empyema with pneumonitis. Treatment with chest tube insertion, continuous suction, and intrapleural administration of fibrinolytic agents was not enough to achieve a cure. Operative treatment under general anesthesia was risky because the patient was bedridden due to a past spinal cord infarction and cerebral infarction; moreover, he could not easily expel sputa. Therefore, we performed our technique of two-port-access thoracoscopic debridement. The patient was placed in the lateral decubitus position, and local anesthesia using 1% lidocaine with epinephrine was injected at two port sites. One 12.5-mm port and one 5-mm port were used. The first port, placed through the fourth intercostal space at the midaxillary line, was inserted in site of preoperative chest tube, and used for inserting a suction instrument. A finger was placed into the chest at the port sites to perform preliminary deloculation and to create a working space in which the endoscope and instruments could be maneuvered. An endoscopic rod-lens telescope (5 mm, 30°) was positioned at the anteroaxillary line, through the fourth intercostal space. Fluid and debris were completely removed using our customized suction instrument under local anesthesia without any other pain control. The operation took 75 minutes. The total amount of 1% lidocaine used for local anesthesia was 18 mL. Bleeding was minimal. His fever has resolved after the operation. The chest tube was removed on postoperative day 3, and the patient was discharged on postoperative day 20.

**Conclusion:** Our customized suction instruments enable the rapid removal of pleural debris. Two-port-access thoracoscopic debridement under local anesthesia can be safely performed and is minimally invasive.