



### **P169: Failure of Pleural Biopsy with the Hybrid Knife: A Case Report**

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**Background:** If fibrotic pleuras were encountered, the standard flexible forceps (SFF) may limit biopsies because the SFF lacks mechanical strength to obtain sufficient pleural specimens. All of the limitations may be overcome, theoretically, by using a Hybrid Knife with a high-pressure water jet. However, we failed to perform pleural biopsy in a patient with the Hybrid Knife.

**Case Report:** A 67-year-old man admitted to our hospital presented with a cough and shortness of breath of a 3-month duration. The chest computed tomography scan showed a massive pleural effusion in the right chest cavity. Pleural fluid analysis revealed a yellowish exudate. Semi-rigid thoracoscopy was performed under local anesthesia. Whitish slightly thickened parietal pleural lesions without nodules were observed, and the surface was smooth. Because we could not obtain specimens from the pleural lesions using an SFF for about 3 minutes, we used the Hybrid Knife (T-type) to perform dissection of pleural lesions. A water jet to inject a solution of 0.9% sodium chloride and methylthioninium chloride injection into the parietal pleura with 30 cm H<sub>2</sub>O of water jet pressure. The performance failed although we tried several times. We used the SFF for pleural biopsy again and tried many times. After about 20 minutes, we obtained a piece of pleura (3×2mm) finally. The pathological diagnosis was metastatic lung adenocarcinoma. Because we suspected that there was something wrong with this Hybrid Knife, we conducted an animal experiment with healthy pig lungs, which confirmed that it was normal.

**Conclusion:** Although medical thoracoscopic biopsy with an Hybrid Knife is a convenient and effective technique, it is not always effective when hard fibrothorax is encountered.

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