Title: Study of thoracoscopic pleural biopsy for nondiagnostic pleural effusion

Body: Background: We performed thoracentesis and pleural biopsy by cope needle to find cause of exudative pleural effusion. Usually about 20% of them can't find cause. We study thoracoscopic biopsy for nondiagnostic patients and characteristics of diseases. Method: We enrolled patients from April 2004 to May 2010. We included patients with nondiagnostic pleural effusion through sputum study, thoracentesis, washing microbiologic study and cytology by bronchoscopy. Twenty-six patients were performed thoracoscopic pleural biopsy. Result: Twenty-four patients were identified. Their mean age was 60.5±15.3 years, and 16(66.7%) of the patients were men. Four patients weren't performed thoracentesis. Characteristics of pleural effusion were lymphodominent (15; 75%), poly-dominent (2; 10%), eosinophil dominant (1; 5%) and unknown (2; 10%). Final diagnosis of patients with undiagnostic pleural effusion were malignant effusion (n=14, 58.3%), Tb pleuray (n=3, 12.5%), chronic inflammation and fibrosis (n=5, 20.8%) and hemorrhagic effusion and eosinophilic effusion (n=2, 8.3%). The most common cause of malignant effusion was secondary not primary lung cancer. Metastatic effusion were 5 patients (35.7%). Malignant mesothelioma were 3 patients (21.4%). adenocarcinoma of unknown origin were 2 patients (14.3%). Primary lung cancer were 4 patients (25.8%). Conclusion: Fifteen patients (58.3%) of nondiagnostic effusion were diagnosed malignant effusion. In These 15 patients, secondary malignant effusion were 10 patients (74.3%). In Conclusion, we consider thoracoscopic biopsy and systemic examination to identified nondiagnostic pleural effusion.