

中文題目：橫膈反轉經由胸腔抽水後肺部力學和氣體交換的變化

英文題目：Changes in pulmonary mechanics and gas exchange following thoracentesis on inversion of a hemidiaphragm

作者：王正信¹

服務單位：安泰醫療社團法人安泰區域醫院胸腔內科¹

Background: The present study was designed to test whether there was a significant improvement in pulmonary function and arterial blood oxygenation after therapeutic thoracentesis on patients with inversion of a hemidiaphragm due to pleural effusion.

Methods: In 21 patients with inversion of a hemidiaphragm because of a pleural effusion, we studied the changes in pulmonary mechanics and gas exchange that occurred in 24 h after removal of 600 to 2,700 mL of fluid by thoracentesis.

Results: There was a small but significant increase in the forced expiratory volume in 1 s (FEV1) and forced vital capacity (FVC) ($p < 0.001$). The alveolar-arterial oxygen gradient ($P[A-a]O_2$) and partial pressure of arterial oxygen (PaO_2) showed a significant increase ($p < 0.001$), but there was no change in partial pressure of arterial carbon dioxide ($PaCO_2$).

Conclusions: In the present study, all patients with a large pleural effusion had inversion of a hemidiaphragm documented by chest sonography, and that was an important factor to observe significant improvement in pulmonary mechanics and gas exchange.