

中文題目：肋膜積水導致橫膈下陷經抽吸術後肺功能改善程度

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

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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.

Materials and 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.