中文題目：胸腔超音波下之隔膜(septum)現象可作為肺炎病患合併複雜性肋膜積液(complicated parapneumonic effusion)之預測因子

英文題目：Sonographic septation : an important predictor of complicated parapneumonic effusion in patients with pneumonia

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Background: Sonographic septation is associated with prolonged hospitalization and increased mortality in patients diagnosed with empyema. However, it is unknown whether sonographic septation is associated with complicated parapneumonic effusion (CPPE) or the need for invasive procedures among patients with pneumonia.

Methods: We retrospectively reviewed the medical records of all hospitalized patients with the diagnosis of pleural effusion. In total, we enrolled 180 patients with non-purulent neutrophilic exudative effusion secondary to pulmonary infections such as pneumonia and lung abscess. We performed univariate and multivariate logistic regression analysis including the baseline clinical characteristics, values from blood samples and sonographic echogenicity, to identify variables correlated with CPPE and the need for invasive management.

Results: Seventy of the 180 recruited patients (38.89%) had sonographic septation. Multivariate logistic regression analysis identified that sonographic septation (adjusted odds ratio (AOR) 3.38 (95% CI, 1.64-6.98), $p = 0.001$) and younger age (AOR 2.63 (95% CI 1.24-5.58), $p = 0.012$) were independently associated with CPPE. With regards to the treatment strategy, sonographic septation (AOR 9.06 (95% CI 3.71-22.11), $p < 0.001$) and total serum protein level (AOR 1.80 (95% CI 1.13-2.86), $p = 0.013$) were independently associated with the need for subsequent invasive management in the patients with PPE in multivariate logistic regression analysis.

Conclusions: Sonographic septation is a useful predictor of CPPE and may imply the need for early invasive management.