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**LETTER**

# Extravascular lung water in acute respiratory distress syndrome and the Berlin definition: time for real change

Michelle S Chew

See related Editorial by Phillips, <http://ccforum.com/content/17/4/174>

I echo the call for a real change in the diagnosis of acute respiratory distress syndrome (ARDS), as put forward in the recent editorial by Phillips [1]. Whilst there are real limitations regarding availability, feasibility and interpretation of extravascular lung water (EVLW), it remains one of the few clinically available quantitative parameters for assessment of the severity of lung injury.

We and others have shown the relationship between different EVLW indices and lung injury [2]. Moreover, our previously published results in this journal support the results of Jozwiak and colleagues showing a twofold increase in the odds ratio for ICU mortality when the pulmonary vascular permeability index was increased [3]. In our study, the area under the curve for the pulmonary vascular permeability index as a predictor for mortality was 0.682 (95% confidence interval 0.505 to 0.859), which is higher than that reported for the Berlin definition of ARDS.

The case for EVLW as a criterion for ARDS definition has been challenged on the grounds of its lack of predictive value and feasibility. Whether EVLW reflects increased hydrostatic or inflammatory edema has been investigated recently, and the pulmonary vascular permeability index appears to be a useful indicator [4,5]. In my opinion, a clear pathophysiological and prognostic relationship exists between EVLW and lung injury [2-6]. Current data support the need for larger, multicenter trials identifying which EVLW index and cutoff values should be applied for diagnoses, and whether EVLW-driven management protocols can improve outcomes in ARDS.

**Abbreviations**

ARDS: Acute respiratory distress syndrome; EVLW: Extravascular lung water.

**Competing interests**

MSC has received travel reimbursements from Pulsion AG, Munich, Germany.

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