Risk of mortality linked to interstitial lung abnormalities

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New research uncovering a link between Interstitial Lung Abnormalities and an increased risk of in-hospital mortality was shared at the ATS 2016 International Conference. Credit: ATS
New research uncovering a link between Interstitial Lung Abnormalities (ILA) and an increased risk of in-hospital mortality was shared at the ATS 2016 International Conference.

"While ILA have been associated with physiologic abnormalities, the association between ILA and mortality had not been previously investigated," said R.K. Putman, MD, Clinical Fellow in Medicine, Beth Israel Deaconess Medical Center. "We wanted to determine whether the presence of ILA on prior chest CT imaging was associated with acute respiratory distress (ARDS) in a cohort of patients from the Registry of Critical Illness (RoCI) at Brigham and Women's Hospital (BWH)."

Researchers performed a retrospective case-control study of 55 patients with ARDS from the RoCI at BWH, as well as chest CT imaging taken at least 7 days prior to the onset of ARDS. Prior CT imaging for 53 age-matched, non-ARDS controls were also examined.

Pre-ARDS chest CT scans were evaluated for ILA by readers blinded to clinical data; multivariable logistic regression models were used to evaluate the association between ILA and ARDS, as well as ILA and in-hospital mortality.

In patients with ARDS, ILA were present in 20 (36 percent), 22 (40 percent) were indeterminate for ILA, and 13 (24 percent) had no ILA. Among patients without ARDS, 6 (11 percent) had ILA, 26 (49 percent) were indeterminate for ILA and 21 (40 percent) had no ILA. After adjustment for important covariates (age, APACHE score, smoking history), the presence of ILA were positively associated with ARDS. Additionally, ILA was also found to be associated with in-hospital mortality.
"We found that in those critically ill patients with prior chest CT imaging, patients with ARDS were more likely to have ILA, and those with ILA on CT imaging prior to the development of ARDS also had a greater risk of in-hospital morality," said Dr. Putnam. "Our findings suggest that cohorts of patients with ARDS may contain patients with undiagnosed interstitial lung disease, and raises the possibility that ILA may, in some cases, be a risk factor for ARDS."

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