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Acute Exacerbation of Idiopathic Nonspecific Interstitial Pneumonia

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Objective: Acute exacerbation (AE) is not uncommon and often fatal in idiopathic pulmonary fibrosis. The report on AE of idiopathic nonspecific interstitial pneumonia (NSIP), however, is anecdotal.

Methods: Among 67 patients with idiopathic NSIP between Jan 1997 and May 2011, AE occurred in 16 patients. Medical records, chest HRCT and lung pathology were investigated.

Results: The median age of 16 patients with idiopathic NSIP who experienced AE was 64 years (male, n=8). Twelve patients initially presented with AE at the time of diagnosis of NSIP. The mean PaO2/FiO2 ratio was 141.9 mmHg (range 45.88 to 179.75). Mechanical ventilation was required in 7. Chest HRCT showed ground glass opacity in 15, irregular linear opacity in 15 and consolidation in 10. DAD with (n=2) or without (n=4) OP on the background of NSIP was observed in lung tissue obtained at AE (n=11). Twelve patients survived. While 2 of 4 patients showing DAD only died, all with OP with or without DAD survived.

Conclusion: Prognosis of AE of idiopathic NSIP was relatively good. All of the patients showing OP in lung tissue survived.

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Fraction of Exhaled Nitric Oxide in Patients with Acute Eosinophilic Pneumonia

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Background: Acute eosinophilic pneumonia (AEP) is an idiopathic disease characterized by pulmonary eosinophilia. Because the fraction of exhaled nitric oxide (FeNO) is a surrogate of eosinophilic inflammation, we evaluated the levels, changes with treatment and the diagnostic role of FeNO in patients with AEP.

Methods: We prospectively enrolled patients at the Armed Forces Capital Hospital who had diffuse pulmonary infiltrates and a febrile illness and who were clinically suspected to have AEP between June 2010 and March 2011. We measured FeNO twice at the initial visit (pre-treatment) and two weeks after the initial measurement (post-treatment).

Results: A total of 60 subjects were enrolled and 31 were diagnosed with AEP. The pre–treatment FeNO levels of the patients with AEP were significantly higher than the non–AEP patients (median 48 [range 5–41] ppb vs. median 14 [range 10–138] ppb, p<0.001). The cut-off value (23.5 ppb) showed that the maximum area under the ROC curve predicted AEP with a sensitivity of 0.87 and a specificity of 0.83. The post–treatment FeNO levels decreased significantly in the AEP patients, and the levels were similar to the non–AEP patients (median 19 [range 7–44] ppb vs. median 14 [range 1–58] ppb, p=0.206).

Conclusions: The FeNO level was significantly higher in AEP than non–AEP patients. FeNO measurement can be used as diagnostic tool to differentiate AEP from non–AEP patients.