

Hospitalized cases of adolescent and adult H1N1 influenza in a university hospital in Korea, September 2009- January 2010

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Background/Aims: A novel influenza A (H1N1) virus originating in swine caused worldwide outbreaks beginning in April 2009. We describe the clinical manifestations and prognosis of adolescents and adults hospitalized with H1N1 influenza in a university hospital in Korea from September 2009 to January 2010. **Methods:** We retrospectively evaluated 43 confirmed cases of pandemic H1N1 influenza in patients aged 13 years and older (30 were females) using a real-time reverse-transcriptase-polymerase-chain-reaction. **Results:** Of the 43 hospitalized patients, 7 (16%) were admitted to the intensive care unit (ICU), and one (2%) died. The median age was 45 years (range 13-82 years), and underlying medical conditions included asthma, diabetes, ischemic heart disease, bronchiectasis, malignancy, and pregnancy in descending order of frequency. Fever was the most common symptom; other symptoms included cough, shortness of breath, rhinorrhea, myalgia or arthralgia, and sore throat. At admission, 25 of 42 (60%) had radiologic findings consistent with pneumonia, and 11 had an exacerbation of chronic respiratory disease. Twenty-three patients needed supplemental oxygen, and two of these developed acute respiratory failure requiring mechanical ventilation. All seven patients admitted to the ICU had underlying conditions, including five with asthma, three with ischemic heart disease, and one each with pregnancy and diabetes. All patients were treated with antiviral therapy initiated a median 2 days after the onset of the illness. **Conclusion:** Asthma was the most common medical condition in the hospitalized cases, and the outbreak caused severe illness requiring ICU care, especially in patients with ischemic heart disease. Most of the patients seemed to benefit from antiviral therapy. Abstract Word Count: 257 words **Keywords:** influenza A (H1N1), pandemic, asthma, ischemic heart disease

Prognostic factors for idiopathic pulmonary fibrosis: Clinical, physiologic, pathologic, and molecular aspects

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Summary Background: Previous studies identified clinical and, physiologic factors of idiopathic pulmonary fibrosis (IPF) that are related to an increased risk of mortality. But there are few studies about histologic and molecular approach. We investigated whether the phosphorylated Smad 2/3 (p-Smad 2/3), tumor growth factor- β (TGF- β) receptor II (T β RII), and the polymorphism of the TGF- β 1 codon 10 are associated with the progression of IPF patients. The levels of C-reactive protein (CRP) were also investigated as potential prognostic factors. **Methods:** Eighty-six IPF patients who underwent surgical lung biopsies were examined. For each patient, clinical and physiologic parameters were investigated, and we performed immunohistochemical staining for p-Smad 2/3 and T β RII and genotyping of the TGF- β 1 codon 10 polymorphism. **Results:** Age at diagnosis, gender, symptom duration, and smoking status did not show a significant association. However, the amount of smoking ($p=0.002$) and severe reduction in the percentages of predicted forced vital capacity ($p=0.013$) and diffusion lung capacity of carbon monoxide ($p=0.023$) at diagnosis were associated with a poor prognosis. Cellularity, fibrosis, expression level of p-Smad2/3 and T β R II and genotype of the TGF- β 1 codon 10 polymorphism did not have a statistically significant association with the prognosis. On the other hand, an abrupt decrease in follow-up pulmonary function parameters and increased level of CRP concentration at diagnosis were significantly associated with poor survival (CRP: $p=0.013$). **Conclusion:** This study confirms that initial pulmonary function parameters, amount of smoking, and the abrupt decrease of lung function parameters are associated with the poor survival in IPF patients. In addition, increased levels of CRP concentration were associated with poor survival of IPF patients in this study. We believe that larger studies are required to confirm such prognostic factors as CRP in IPF patients.