

## 투석환자에서 대유행 H1N1 인플루엔자의 발생율과 임상 양상

경북대학교 의학전문대학원 내과학교실<sup>1</sup>, 영남대학교 의과대학 내과학교실<sup>2</sup>  
대구파티마병원 내과<sup>3</sup>, 가톨릭대학교 의과대학 예방의학교실<sup>4</sup>

조장희<sup>1</sup> · 최지영<sup>1</sup> · 박선희<sup>1</sup> · 김찬덕<sup>1</sup> · 정선영<sup>2</sup> · 조규향<sup>2</sup>  
박종원<sup>2</sup> · 도준영<sup>2</sup> · 이덕현<sup>3</sup> · 김성호<sup>3</sup> · 김종연<sup>4</sup> · 김용림<sup>1</sup>

### Incidence of 2009 Pandemic H1N1 Influenza in ESRD Patients with Different Dialysis Modalities

Jang-Hee Cho<sup>1</sup>, Ji-Young Choi<sup>1</sup>, Sun-Hee Park<sup>1</sup>, Chan-Duck Kim<sup>1</sup>  
Sun-Young Jung<sup>2</sup>, Kyu-Hyang Cho<sup>2</sup>, Jong-Won Park<sup>2</sup>, Jun-Young Do<sup>2</sup>  
Duk-Hyun Lee<sup>3</sup>, Sung-Ho Kim<sup>3</sup>, Jong-Yeon Kim<sup>4</sup>, Yong-Lim Kim<sup>1</sup>

Department of Internal Medicine<sup>1</sup> Kyungpook National University School of Medicine  
Department of Internal Medicine<sup>2</sup> Yeungnam University Hospital  
Department of Internal Medicine<sup>3</sup> Daegu Fatima Hospital  
Department of Preventive Medicine<sup>4</sup> Catholic University of Daegu School of Medicine

**Background :** The pandemic of the novel influenza A (H1N1) was declared by the World Health Organization on June 11, 2009 and then the first pandemic wave has subsided since winter peak, still remaining many questions in managing high-risk groups of influenza-related complications including end-stage renal disease. This study aims to compare the incidences of pandemic H1N1 influenza between peritoneal dialysis (PD) and hemodialysis (HD) groups and identify the characteristics of dialysis patients with pandemic H1N1 influenza.

**Methods :** To calculate the incidence of pandemic H1N1 influenza, the dialysis population was defined as the dialysis patients visiting regularly each general hospitals from September 2009 to December 2009. The demographics and comorbidities of the patients in dialysis population were examined. We surveyed the demographics and clinical data of laboratory-confirmed patients with pandemic H1N1 influenza during this period by chart review and interviewing.

**Results :** As of Dec. 31, 2009, 840 dialysis patients were recruited for the dialysis population and 18 cases of pandemic H1N1 influenza were confirmed from three general hospitals. The incidence of HD group (14 of 343, 4.1%) was higher than that of PD group (4 of 497, 0.8%,  $p=0.001$ ). In total dialysis population, HD patients ( $57.7\pm 13.5$ ) were older than PD patients ( $53.9\pm 13.3$ ,  $p<0.001$ ). HD group had significantly more comorbidities such as cardiovascular disease, liver disease, diabetes mellitus, neurologic disorder, malignancy than PD group. The mean age of pandemic H1N1 influenza patients was  $46.6\pm 14.0$  years and the majority cases (72.2%) were from 25 to 44 and 45 to 64 years old subgroups. 56% of patients had more than one comorbidity and the most common symptoms were fever and cough (77.8%). All patients were treated with oseltamivir except one patient with zanamivir. 6 patients (33.3%) were admitted and the median hospitalization length was 15 days (range 2-51). The mean age of admitted patients ( $58.5\pm 10.3$ ) was higher than that of outpatients ( $39.9\pm 11.5$ ,  $p=0.004$ ) and the proportion of admitted patients with cardiovascular disease (50.0%) was higher than that of outpatients (0.0%,  $p=0.025$ ).

**Conclusion :** Incidence of pandemic H1N1 influenza in dialysis patients was higher in HD group and might be associated with older age and multiple comorbidities. The hospitalization rate in dialysis patients was associated with older age and cardiovascular disease.

**Key Words :** 대유행 신종인플루엔자, 투석방식, 발생율

2009 pandemic H1N1 influenza, dialysis modality, incidence