뇌신경재활

게시일시 및 장소 : 10 월 18 일(금) 13:15-18:00 Room G(3F) /

질의응답 일시 및 장소 : 10 월 18 일(금) 15:57-16:01 Room G(3F)

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Mortality after Parkinson's Disease and related co-morbidities: A nationwide matched cohort study

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Objective

Mortality rate in patients with Parkinson's disease (PD) ranged from 21% to 72% in previous studies. Many previous studies were conducted in clinics and clinical trials based cohorts, and enrolled relatively small number of participants, range from 59 to 800 patients. And most studies on PD survival were performed 10 years ago or more. Co-morbidity burden may be an important prognostic factor for mortality in PD; thus understanding its influence on mortality is important for studies of mortality in PD. The objective of this study was to evaluate the mortality rate in PD using a large nationwide cohort in Korea, and to find out the effects of co-morbidities on mortality in PD.

Materials & Methods

The nationwide population-based matched cohort study was conducted using the Korean National Health Insurance Service cohort data. We selected patients with a primary diagnosis of Parkinson's disease (ICD-10 code: G21) and registration code for PD (V124) in the program for rare intractable diseases between 2002 and 2015. A matched cohort without PD was enrolled by randomly matching patients by sex, age, year of diagnosis, and residential area to the PD group with a ratio of 1:9. Cox proportional hazard models were used to identify risk factors associated with mortality using Hazard Ratios and 95% confidence intervals. We calculated the mortality rate using Kaplan-Meier method, and used the log-rank test to compare the survival distributions between the two groups. Additionally, we performed logistic regression analysis to identify risk factors associated with mortality in PD cohort using Odds Ratios and 95% confidence intervals. P < 0.05 was considered statistically significant. The statistical software SAS System for Windows, version 9.4 (SAS Institute Inc, Cary, NC) was used to perform the statistical analyses.

Results

In total, 31,860 patients were enrolled in the study: 3,186 in the PD cohort and 28,674 in the matched control cohort. During the follow up periods, mortality rate was 34.56% in PD cohort and 17.59% in the comparison cohort. After adjusting for co-morbidities, the Cox

proportional regression model showed and adjusted hazard ratio of 2.510 (95% CI, 2.334-2.698) for mortality in PD cohort. Log-rank test revealed a significantly higher rate of mortality in PD cohort. Co-morbidities, such as hypertension (OR = 1.211, 95% CI, 1.026-1.430), ischemic stroke (OR = 2.409, 95% CI, 2.030-2.858), hemorrhagic stroke (OR=2.230, 95% CI, 1.511-3.291), and hip fracture (OR = 1.607, 95% CI, 1.119-2.310) were significantly associated with mortality in PD cohort.

Conclusions

During the 12 year of follow-up periods, PD cohort showed almost doubled mortality rate compared to control cohort, after adjusting for potential confounders. Co-morbidities such as hypertension, ischemic stroke, hemorrhagic stroke, and hip fracture were found to be associated with increased mortality in PD.