

통증 및 근골격재활

게시일시 및 장소 : 10 월 18 일(금) 08:30-12:20 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 10:00-10:45 Room G(3F)

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The Rate of Carpal Tunnel Release in Carpal Tunnel Syndrome Patients with Diabetic Polyneuropathy

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Objective

Previous studies have reported that which factors of Diabetes Mellitus(DM) affect Carpal Tunnel Syndrome(CTS) and whether the DM or Diabetic Polyneuropathy(DPN) have any effect on the surgery outcome. However, there have been few studies about the correlation of DM or DPN and the rate of surgical treatment in patients of CTS. The purpose of this study was to identify whether the DM and DPN increase the rate of carpal tunnel release(CTR) in patients with CTS or not.

Method

We conducted a retrospective nationwide cohort study using the Korean National Health Insurance Database between 2004 and 2015. International Classification of Disease, 10th Revision (ICD-10) diagnosis codes and surgery fee codes were used to identify the patients who were diagnosed with CTS(G56.0), DM(E10-E11, E13-E14) and DPN(E10.41, E11.41, E13.41, E14.41, G62, G62.8, G62.9, G63, G63.2, G63.3, G63.8), and the patients who were received CTR(N0931, N0932). And we enrolled the CTS patients who had visited the clinic more than 3 times on same code. Adjusted hazard ratios (aHRs) with 95% confidence interval(CI) of CTR were estimated using the Cox proportional hazards model after controlling for age, sex, type of insurance, income, residential area and comorbidities (hypertension, dyslipidemia, ischemic heart disease, cerebrovascular disease, stroke, hypothyroidism, rheumatoid arthritis). We calculated the surgery rate of CTS using the Kaplan–Meier method, and the differences were determined using log-rank tests. Data analyses involved use of SAS System for Windows, version 9.4 (SAS Inc., Cary, NC, USA). P value < 0.05 was considered statistically significant.

Results

A total of 12,419 CTS patients were enrolled and underwent surgical treatment in 3,039 among them. CTS without DM group had higher CTR rate (26.11%, 2,187/8,376) than CTS with DM group (21.07%, 852/4,043) and adjusted HR was 0.889(95% CI, 0.813-0.973). There were 548 of DPN patients in the 4,043 of CTS with DM cohorts. Increased rate of CTR was associated with DPN(aHR, 1.290, 95% CI, 1.064-1.562) compared to CTS patients with

only DM. Especially in male patients with CTS and DPN, aHR was more increased compared to CTS patients with DM only. (aHR, 1.653, 95% CI, 1.083-2.525). Type of insurance, household income and residential area were not significantly related with surgery rate.

Conclusion

DM was not associated with the surgical treatment rate in the patients with CTS. However, DPN increase the surgical treatment rate in the patients with CTS, especially in the male.