

Proton pump inhibitor 사용에 따른 혈중 마그네슘의 변화

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Change in Serum Magnesium Concentration after Use of a Proton Pump Inhibitor

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Introduction: Although cross sectional reports suggested the relationship proton-pump inhibitor (PPI) use with hypomagnesemia, no large-scale cohort studies have been conducted. Here we examined the change of serum magnesium concentration after use of PPI (PPI group) or no use of this (control group) among 1076 retrospective cohort, who underwent percutaneous coronary intervention (PCI) in a tertiary medical center.

Methods: Among 2892 hospitalization for PCI from Jan 2007 to May 2012, 1076 patients who have baseline normal serum magnesium concentration (1.6-2.5 mg/dL) and follow up serum magnesium concentration, was enrolled. Hypomagnesemia was defined <1.6 mg/dL. First, Patients was divided PPI group and control group. Second, PPI group was divided short term PPI group (the use period <12 month) and long term PPI group (the use period \geq 12 months).

Results: The mean follow-up period was 9.51 ± 2.94 months. The each incidence of hypomagnesemia was 0.4% in PPI group (3/834) and 0.4% in control group (1/242) during follow up period ($p=0.904$). Baseline magnesium level were no different between control group (2.02 ± 0.18 mg/dL) and PPI group (2.03 ± 0.18 mg/dL) ($p=0.954$). The other baseline characteristics (calcium, potassium, use of diuretics, DM, Hypertension, sex, age, GFR) were not different between two groups. After ANCOVA adjusting for age, sex, baseline GFR, baseline calcium, use of diuretics, baseline potassium and PPI intensity, the follow up magnesium were not significant difference between two groups ($p=0.381$). Also the follow up magnesium was not significant difference among long term PPI group ($n=76$), short term PPI group ($n=763$) and control group ($n=242$) ($p=0.620$).

Conclusion: Although hypomagneseemia could develop after PPI use, the change of magnesium is not significant different after PPI use in patients with baseline normal value of magnesium.

Key Words: 양성자 펌프 억제제, 마그네슘, 이뇨제
Magnesium, Proton pump inhibitor, Diuretics