Influence of Age on Treatment with Proton Pump Inhibitor in Patients with Laryngopharyngeal Reflux Disease—A prospective, multi-center study

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ABSTRACT

Objective/Hypothesis: The influence of age in severity and response to proton pump inhibitor (PPI) in patients with laryngopharyngeal reflux (LPR) is unclear. Thus, we conducted a prospective cohort study to assess the difference in severity and response to PPI according to age in patients with LPR.

Study Design: Prospective study in multi tertiary referral centers

Methods: Two hundred twenty-nine patients with LPR who were referred to the otolaryngology clinic from November 2010 to February 2012 were enrolled in the study. All of the enrolled patients were prescribed 15mg of Lansoprazole (PPI) twice daily for three months. Data, including the Reflux Symptom Index (RSI), Reflux Finding Score (RFS), and LPR-Health related quality of life (LPR-HRQOL), were collected from patients at the baseline visit and at 1, 3 months post baseline.

Results: The older patient groups (60-79 years) showed a higher score in RSI (p<0.001) and LPR-HRQOL (p<0.001) at baseline than the younger patient groups. However, the RFS score showed no significant difference among age subgroups. Within each age subgroup, RSI, RFS and LPR-HRQOL showed significant improvement with PPI therapy, however, no difference in improvement of RSI, RFS or LPR-HRQOL was seen among the subgroups. The responders who had changes in RSI score at three months were found significantly more often in the younger group than the older group at 3 months (p=0.002).

METHODS AND MATERIALS

Patients with suspected LPR who were referred to three different otolaryngology clinics from November 2010 to February 2012 were assessed for eligibility in the study. LPR was diagnosed based on the presence of at least one of the following symptoms: hoarseness, chronic cough, throat irritation, laryngospasm, chronic throat clearing, and dysphonia. Diagnosis of LPR was also based on confirmed symptoms such as LPR. All evaluations were conducted by Belafsky et al with a laryngologist. A greater than 50% primary RSI improvement from baseline was considered a response to PPI therapy.

RESULTS

Study populations

Of 264 consecutive patients considered for the study, 254 were included due to loss of follow-up at three months. A total of 229 patients with LPR were enrolled. There were 135men (58.9 %) and 94 women (41.1%). The study was completed without loss to follow-up by all 229 patients. The mean age of the patients was 55.7 ± 14.0years, with a range from 18 to 79. According to age, patients were divided into three subgroups of 18-39, 40-59 and 60-79 years. The number of patients in each subgroup was 35 (15.0%), 83 (35.5%), and 111(49.5%), respectively (Table 1).

Difference of RSI, RFS and LPR-HRQOL according to age

The older patient group (60-79 years) with LPR had significantly higher RSI score than the younger patient group (18.45 ± 10.43 vs 13.88 ± 7.88, 12.20 ± 8.90, p<0.001). However, the RFS score showed no significant difference among age subgroups. The older patient group showed significantly worse results on all the domains of LPR-HRQOL (all p<0.001) (Table 2).

Improvement of RSI, RFS and LPR-HRQOL after PPI therapy

Within each subgroup according to age, the RSI, RFS and LPR-HRQOL showed significant improvements during the period of PPI therapy, however, no difference in improvement of RSI, RFS, and LPR-HRQOL was seen among the subgroups (p=0.992, 0.503 and 0.088, respectively) (Table 3).

Difference of responder on RSI according to age

Among the age subgroups, the percentage of responders in RSI showed no significant difference at 1 month, however, the responders in RSI were significantly more plentiful in the younger group than the older group at 3 months (p=0.002) (Table 4).

Conclusions:

Although there was no difference on the objective finding among the group according to age, subjective severity of LPR in the elderly is significantly greater than in younger patients. Furthermore, older patients are more likely to not respond to PPI than younger patients.

REFERENCES