Background

Proton pump inhibitor therapy (PPI Rx) is known to be most effective when dosed prior to meals. Maximal efficacy of the PPI's relies on the drugs having adequate time to inhibit the gastric proton pump mechanism prior to the stimulation of gastric acid secretion by consumed food Inappropriate dosing habits may result in ineffective symptom control and inappropriate dose escalations. The purpose of this study was to investigate whether GERD patients in a community-based setting administer PPI doses at times ensuring maximal drug efficacy.

Methods

One hundred sequential patients on PPI Rx referred to a community based gastroenterologist for the evaluation of GERD symptoms were questioned in detail by an office assistant concerning their drug dosing habits. "Correct dosers" (CDs) were those taking their PPI with or up to 60 minutes prior to a meal. The optimal dosing time in this range was defined as 15 to 30 minutes prior to meals. "Incorrect dosers" (ID's) took their PPI either PRN, after meals, QHS, or greater than 60 minutes before food.

Results

Forty six percent of patients were CD's, with only 12 of them taking their doses in the optimal range. Fifty four percent were IDs with 2 (4%) taking their PPI PRN, 16 (30%) after meals, 15 (28%) QHS, and 21 (39%) greater than 60 minutes before food. Of the 79 QD PPI users 35 (44%) were CDs with only 5 (6%) of them taking their drug in the optimal range. 11 of 21 BID/TID users (52%) were CDs, with seven of them taking their doses during the optimal range. Of the 10 BID/TID patients who were IDs, six took one dose incorrectly and four took all doses incorrectly.

Conclusions

Over half of patients in this study were taking their PPIs incorrectly and only 12% were dosing the drug optimally. Given the large number of patients taking their PPI's incorrectly and their significant per-dose cost, the potential economic implications of dose escalations for presumed treatment failure are substantial. Prior to labeling a patient a PPI Rx failure, physicians must question non-responders about their dosing habits and educate them accordingly. Studies are underway to assess the impact of optimizing dosage schedules on GERD symptom control in patients taking PPIs inappropriately.

References

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