Potential Role of Tegaserod in Optimizing Treatment of Laryngopharyngeal Reflux

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Abstract

Objective: To investigate the role of Tegaserod in optimizing the medical treatment of patients with Laryngopharyngeal Reflux.

Methods: A retrospective cohort of 22 female patients with Irritable Bowel Syndrome who were also found to have LPR were identified. Subjects were treated with tegaserod (Teg) 6 mg twice daily or a standard PPI regimen 2 months prior to entry into the study. All patients underwent upper endoscopy and pH monitoring with esophageal and distal esophageal impedence. A single Otolaryngologist-standardized videolaryngoscopy and subjective questionnaires (i.e. VHI, RSI) by a single Otolaryngologist for concurrent Laryngopharyngeal Reflux unresponsive to maximal PPI therapy.

Results: The select cohort of IBS-C patients with LPR were found to be unresponsive to maximal dose PPI for a minimum of 3 months. These patients demonstrated persistent gastric refluxate which appears to be non-acid as to the etiology of their laryngopharyngeal signs and symptoms. The addition of tegaserod 6 mg po bid to their existing regimen not only relieved their laryngeal symptoms but marked improvement in all patients with 91% reporting complete resolution of LPR symptoms and 77% demonstrating significant improvement or complete resolution of symptoms. Life style modifications were continued for an additional period of 6 month follow-up (9-24 months). Two patients (9%) requiring another course of Tegaserod at 12 months with reproducible subjective and objective response and resolution of recurrent LPR symptoms.

Conclusions: A significant proportion of LPR is due to mucosal damage and inflammation from non-acidic gastro-duodenal reflux. The patients comprise a large population of LPR patients that are classified as non-responders to medical therapy. It is concluded that, for patients with unresponsive laryngopharyngeal reflux, symptomatic improvement is possible with the addition of tegaserod 6 mg twice daily to their existing regimen. The combination of tegaserod and PPI appears to improve upper GI function and markedly improve the signs and symptoms attributed to LPR.

Key Words: Laryngopharyngeal Reflux, pH monitoring,videolaryngoscopy, Irritable Bowel Syndrome, constipation, Proton Pump Inhibitors.

Introduction

With over 10 million Americans significantly affected by LPR every year, no effective medical treatment has been found. Standard medical therapy for GER, including lifestyle modifications and maximal dose Proton Pump Inhibitors (PPIs) are ineffective in up to 60% of these patients with continued symptoms which dramatically reduce quality of life. Many otolaryngologists - head and neck surgeons and others have proposed that, although it is related to and sometimes occurs in patients with GERD, LPR, the backflow of gastric contents into the laryngeal and pharyngeal area (posterior laryngitis, edema, erythema, and pachydermia) laryngeal signs on repeat laryngoscopy with a minimum of 9 months reporting complete resolution of LPR symptoms and 77% demonstrating significant improvement or complete resolution of symptoms. Life style modifications were continued for an additional period of 6 month follow-up (9-24 months). Two patients (9%) requiring another course of Tegaserod at 12 months with reproducible subjective and objective response and resolution of recurrent LPR symptoms.

Methods and Materials

A retrospective cohort of 22 female patients between 21 and 56 years of age, diagnosed previously with Irritable Bowel Syndrome with constipation who were also found to have LPR using videolaryngoscopy, 24-hour ambulatory dual-probe pH monitoring and MII were initially treated unsuccessfully with PPIs for life style modifications and maximal dose PPI for a minimum of 12 weeks prior to being titrated on Tegaserod for their IBS-C. Regular follow up for LPR was conducted using laryngoscopy (i.e. RFS) and subjective questionnaires (i.e. VHI, RSI) by a single Otolaryngologist for concurrent Laryngopharyngeal Reflux unresponsive to maximal PPI treatment. Non-parametric statistical tests are used to evaluate the data.

Results

The select cohort of IBS-C patients with LPR were found to be unresponsive to maximal dose PPI for a minimum of 3 months. The pH and impedence monometry in these patients demonstrated significant gastric refluxate which appears to be non-acid as to the etiology of their laryngeal injury in the large subset of LPR patients unresponsive to standard medical therapy. Tegaserod or an equivalent prokinetic drug as a multidrug approach for the treatment of persistent LPR prior to surgical referral. A significant proportion of LPR may be due to mucosal irritation and damage from non-acid gastric-duodenal refluxate. These patients comprise a large population of LPR patients that are classified as non-responders to medical therapy. Tegaserod is a novel prokinetic drug that improves gastric emptying and significantly reduces the volume and frequency of gastric and bile refluxate. The combination of Tegaserod and PPI appears to improve upper GI function and markedly improve the signs and symptoms attributable to LPR.

Conclusions

The current recommended diagnostic and treatment algorithms for LPR (empiric therapy using PPIs followed by 24-hour ambulatory pH monitoring for non-responders), fail well short of ideal in treating this group of patients. Up to 50% of patients with laryngoscopic signs suggesting GERD do not respond to aggressive acid suppression and do not have abnormal esophageal acid reflux values on testing. The investigator’s observations of high rate of complete or near-complete resolution of persistent LPR signs and symptoms in IBS-C patients treated with a combination of Tegaserod and PPIs suggest a possible role for the addition of Tegaserod or an equivalent prokinetic drug as a multidrug approach for the treatment of persistent LPR prior to surgical referral.

Currently available, validated instruments widely used to standardize the assessment of clinically significant LPR.

Bibliography