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Original Research Article

Efficacy and Safety of Pantoprazole and Levo sulpiride in Gastro-oesophageal reflux Disease

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Abstract: Gastro oesophageal reflux disease (GERD) and dyspepsia are chronic gastric disorders, highly prevalent in Indian population. Pantoprazole is a well established PPI, which specifically inhibits the H+-K+-ATPase of gastric cells to suppress gastric acid secretion. Levo sulpiride is a neuroleptic and Dopamine D2-specific antagonist, which blocks presynaptic dopaminergic receptors at low doses resulting in decreased dopamine synthesis and release. This study was conducted to assess the symptomatic efficacy and tolerability of Pantoprazole and levo sulpiride combination in the management of GERD and dyspepsia in the Indian population. The settings and design was an observational, prospective, uncontrolled, open label, single centre study in Indian patients. The methods and materials were Total 1000 patients were enrolled in the study. Patients were prescribed Pantoprazole 40 milligram with levo sulpiride 75 milligram sustained release fixed dose combination orally daily for 28 days. The efficacy and tolerability assessment was performed on day 29-32 after beginning the treatment and recorded in the case report forms. The efficacy of Pantoprazole plus levo sulpiride combination was estimated on the changes from the baseline in the symptom score on a on a frequency scale for symptoms of GERD (FSSG). In results Pantoprazole and levo sulpiride combination effectively controlled GERD and dyspepsia symptoms in all patients and none of the patients showed worsening of the symptoms. The overall mean FSSG score decreased by 60.89%, from 18.88 to 8.28. Pantoprazole and levo sulpiride combination was well tolerated by 98.2 % patients. Only 1.8% patients did not tolerate Pantoprazole and levo sulpiride combination. In conclusion the present study demonstrates that Pantoprazole and levo sulpiride combination symptomatically controls GERD and dyspepsia with good tolerability.
Keywords: Pantoprazole, levo sulpiride, dyspepsia

INTRODUCTION:

Gastroesophageal reflux disease (GERD) and dyspepsia are chronic gastric disorders, highly prevalent in Indian population [1]. The gastric mucosa can withstand a wide range of pH, osmolality and temperature due to its defence mechanisms, whose impairment leads to gastric disorders. In addition increased gastric acid secretion contributes to the pathogenesis of GERD and dyspepsia. These conditions impact the patient quality of life significantly, accompanied by morbidity and in extreme cases mortality [2]. Proton pump inhibitors (PPI), muscarinic antagonists and antacids are commonly used to control GERD and other gastric disorders.

Pantoprazole is a well established PPI, which specifically inhibits the H+-K+-ATPase of gastric cells to suppress gastric acid secretion. Pantoprazole alleviates heartburn and other GERD related symptoms. Levo sulpiride is a neuroleptic and Dopamine D2-specific antagonist, which blocks presynaptic dopaminergic receptors at low doses resulting in decreased dopamine synthesis and release [3, 4]. It acts on both central and peripheral nervous system and is used as an antipsychotic and antidepressant, as well as to treat a wide array of disorders including GERD and dyspepsia related symptoms.

This study was conducted to assess the symptomatic efficacy and tolerability of Pantoprazole and levo sulpiride combination in the management of GERD and dyspepsia in the Indian population. The primary efficacy endpoint of the study was the evaluation of GERD symptom score on day 0 and day

29 post-treatment. The secondary efficacy endpoint was evaluation of the individual mean frequency of each GERD symptom on day 0 and day 29.

SUBJECTS AND METHODS:

Study Design

An observational, prospective, uncontrolled, open label, single centre study in Indian patients.

Place and Duration of Study

Patients were enrolled from outpatient medicine department of a tertiary care hospital from January 2014 to November 2015.

Methodology

Total 1000 patients were enrolled in the study. Patients were prescribed Pantoprazole 40 milligram with levo sulpiride 75 milligram sustained release fixed dose combination orally daily for 28 days as per Doctors discretion. Before screening all participating patients received full verbal and written details of the study including study procedure and use in the subject information sheet. Before enrolling, informed patient consent was obtained by their signing of the informed consent form. At screening, enrolment was based on eligibility criteria, medical history and clinical examination. Demographic information such as age, sex, height and weight were recorded. The symptom score at baseline was recorded. Pre-study physical examination was carried out at physician's discretion. All information obtained during screening was entered in the case report form. The efficacy and tolerability assessment was performed on day 29-32 after beginning the treatment and recorded in the case report forms. The efficacy of Pantoprazole plus levo sulpiride combination was estimated on the changes from the baseline in the symptom score on a on a frequency scale for symptoms of GERD (FSSG). The scoring was as follows: never=0; occasionally=1; sometimes=2; often=3; and always=4. Tolerability was assessed as tolerable=yes; and not tolerated=no. The primary efficacy endpoint was the evaluation of GERD symptom score on day 0 and day 29 post-treatment. The secondary efficacy endpoint was evaluation of the individual mean frequency of each GERD symptom on day 0 and day 29.

The inclusion criteria were as follows: Adult males or females, age 18-70 years; patients with symptomatic evidence of dyspepsia, GERD and voluntary patient consent. All pregnant and lactating females were excluded from the study. Patients < 18 or > 70 years; patients with a history of gastrointestinal surgery, Barrett's oesophagus; oesophageal motility disorder and with history of allergic drug reactions were excluded from the study.

RESULTS:

The data was obtained from intent to treat patient population of 1000, of which 694 (69.4 %) were males and 306 (30.6 %) were females. Mean age of patients was 48 years (+ 5.8 SD). The average height was 161.29 cm and average weight was 67.11 kg.

Pantoprazole and levo sulpiride combination effectively controlled GERD and dyspepsia symptoms in all patients and none of the patients showed worsening of the symptoms. Pantoprazole and levo sulpiride combination treatment significantly reduced the average FSSG score from baseline for all symptoms related to heartburn, stomach bloating and heaviness, nausea and acid regurgitation on day 29 post-treatment (Table.1). The overall mean FSSG score decreased by 60.89%, from 18.88 to 8.28. Pantoprazole and levo sulpiride combination was well tolerated by 98.2 % patients. Only 1.8% patients did not tolerate Pantoprazole and levo sulpiride combination.

Table.1

Parameters	Baseline	Response after 28 days
FSSG efficacy score	18.88	8.28
Tolerability	98.2%	

DISCUSSION:

Levo sulpiride was well tolerated and all side effects were in accordance with those reported in previous studies and coincided with the descriptions in the package insert of the drug. The prokinetics agent cisapride has been a well-evaluated form of pharmacological treatment for patients with functional dyspepsia, but serious cardiovascular effects with the use of this drug have been reported, which caused removal of the drug from the US market in 2000. A recent systematic review of management strategies (combinations of initial investigation and empirical treatments) for dyspeptic patients[5] concludes that PPIs are effective in the treatment of dyspepsia in those trials which may not adequately exclude patients with Gastroesophageal reflux disease. The prokinetics effect of levo sulpiride is mediated through the blockade of enteric (neuronal and muscular) inhibitory D2 receptors, and the ability to interact with 5-HT4 receptors. The serotonergic (5-HT4) component of anti dopaminergic prokinetics enhances their therapeutic efficacy in gastrointestinal disorders, such as functional dyspepsia and diabetic gastro paresis [6, 7]. The antagonism of central D2 receptors may lead to both therapeutic (eg, antiemetic effect due to D2 receptor blockade in the area postrema) and adverse (including hyperprolactinemia and extra pyramidal dystonic reactions) effects. Hyperprolactinemia is a side effect occurring with all antidopaminergic prokinetics. In a randomized, double-masked trial [8] in which the

effects of the effects of 8 weeks of treatment with either levo sulpiride 25 mg TID (n=69) or cisapride 10 mg TID (n=71) were compared. Both levo sulpiride and cisapride improved dyspeptic symptoms and decreased total symptom score (79.9% and 71.3%, respectively); no significant statistical difference between treatments was found (p=0.07 for total symptom score). However, significantly more (p=0.03) patients treated with cisapride had to abandon the trial because of side effects.

CONCLUSION

The present study demonstrates that Pantoprazole and levo sulpiride combination symptomatically controls GERD and dyspepsia with good tolerability.

REFERENCES:

1. Katelaris PH, Tippett GH, Norbu P, Lowe DG, Brennan R, Farthing MJ; Dyspepsia, Helicobacter pylori, and peptic ulcer in a randomly selected population in India. Gut 1992; 33:1462-6.
2. Shin JM, Vagin O, Munson K, Kidd M, Modlin IM, Sach G; Molecular mechanisms in therapy of acid-related diseases. Cell Mol Life Sci 2008; 65:264-81.
3. Mucci A, Nolfe G, Maj M; Levo sulpiride: A review of its clinical use in psychiatry. Pharmacological Research 1995; 31:95-101.
4. Rossi F, Forgione A; Pharmaco toxicological aspects of levo sulpiride. Pharmacol res 1995; 31:81-94.
5. Delaney B, Ford A, Forman D, Moayyedi P, Qume M; Initial management strategies for dyspepsia. Cochrane Database Syst Rev. 2005; 19(4) CD001961.
6. Mansi C, Savarino V, Vigneri S, Perilli D, Melga P, Sciabà L *et al.;* Gastro kinetic effects of levo sulpiride in dyspeptic patients with diabetic gastro paresis. Am J Gastroenterol. 1995; 90(11):1989–93.
7. Tonini M, Cipollina L, Poluzzi E, Crema F, Corazza GR, De Ponti F; Clinical implications of enteric and central D2 receptor blockade by antidopaminergic gastrointestinal prokinetics. Aliment Pharmacol Ther. 2004; 19(4):379-390.
8. Mearin F, Rodrigo L, Perez-Mota A, Balboa A, Jiménez I, Sebastián JJ, *et al.;* Levo sulpiride and cisapride in the treatment of dysmotility-like functional dyspepsia: a randomized, double-masked trial. Clin Gastroenterol Hepatol. 2004; 2(4):301–8.