



CODEN [USA]: IAJPBB

ISSN : 2349-7750

## INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

SJIF Impact Factor: 7.187

<http://doi.org/10.5281/zenodo.4351903>
Available online at: <http://www.iajps.com>

Research Article

### EVALUATION OF TOO MUCH USE OF PROTON PUMP INHIBITORS ASSOCIATED THROMBOCYTOPENIA

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Article Received: October 2020

Accepted: November 2020

Published: December 2020

**Abstract:**

**Objective:** The main objective of this research was to determine thrombocytopenia associated with excessive proton pump inhibitor use.

**Place and duration of study:** This research was performed in the medical departments of Nishtar Hospital Multan from May 2019 to November 2019 for seven months.

**Type of study:** It's an observational research analysis.

**Materials and methods:** A total of 50 patients who used proton pump inhibitors were included in this study. Blood samples were obtained from all of these patients and sent for thrombocyte measurement to a reputable laboratory. In both these patients, duodenal ulcers were a common medical problem in the past. All the patients had already used NSAIDs. Data was collected on a proforma pre-designed. Many of the patients received informed consent. The approval of the Ethical Committee was approved.

**Results:** Data analysis of these 50 patients was performed, showing that there is a small declining trend in neutrophils and white blood cells. Because patients used no other drug except for a single dose of heparin that was administered prophylactically, which may be the source of thrombocytopenia, it was recommended that the proton pump inhibitor be stopped. The number of drug platelets increased to  $99 \times 10^3/\text{mm}^3$  within two days of keeping them. At that time, non-specific gastritis was seen in the upper GI endoscopy. Infections of *H.pylori* are negative during biopsies.

**Conclusion:** Our research showed that the cause of thrombocytopenia might be proton pump inhibitors.

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Please cite this article in press Maryam Shabbir et al, Evaluation Of Too Much Use Of Proton Pump Inhibitors  
Associated Thrombocytopenia., Indo Am. J. P. Sci, 2020; 07(12).

**INTRODUCTION:**

Proton pump inhibitors are one of the most commonly used medicines to treat gastric acid-related disorders. Proton pump inhibitors stop the development of acid by gastric cells by inhibiting the potassium hydrogen ATPase parietal cell mechanism that is needed for the final stage of acid production. These are the most effective hydrogen potassium ATPase inhibitors available, and their function in the treatment of acid-related disorders is well known. For the treatment of Zollinger-Ellison syndrome, bleeding gastroduodenal ulcers, gastroesophageal reflux disease, eradication of *H.pylori* infection and Barrett's oesophagus infections, Proton pump inhibitors are most widely used. PPI is one of the most commonly used drugs for acid-related conditions and is used over a long period by most patients. While they are not labelled, long-term usage has been correlated with side effects. All available PPIs, such as pantoprazole, omeprazole, rabeprazole, have a common nucleus of benzimidazole and various branch structure forms. These drugs bind to cysteine proton pump molecules on gastric parietal cell secretory membranes and avoid the production of acid. Every available PPI has the same structure, so they have the same features. To achieve adequate bioavailability, administration of these drugs with an acid neutralising agent is required.

**MATERIALS AND METHODS:**

This research involved a total of 50 patients using proton pump inhibitors. Blood samples were obtained from all of these patients and sent for thrombocyte measurement to a reputable laboratory. In both these patients, duodenal ulcers were a common medical problem in the past. All the patients had already used NSAIDs. Data was collected on a proforma pre-designed. Many of the patients received informed consent. The approval of the Ethical Committee was approved.

**RESULTS:**

Data review of these 50 patients was carried out, showing that there is a small declining trend in neutrophils and white blood cells. Since patients used no other drug except a single dose of heparin administered prophylactically, which may be the cause of thrombocytopenia, it was suggested that the proton pump inhibitor be stopped. The drug platelet count rose to  $99 \times 10^3/\text{mm}^3$  within two days of retaining them. At that time, unspecified gastritis was seen in the upper GI endoscopy. Infections of *H.pylori* are negative during biopsies.

**DISCUSSION:**

After long-term use, side effects associated with the use of proton pump inhibitors take place. Depending on the nature of the reflux esophagitis, when the symptoms are present, PPI should be used intermittently. Low-grade reflux esophagitis should not progress to high-grade reflux esophagitis, which may lead to esophageal strictures or bleeding even in the absence of medication. Long-term administration of PPI requires high-grade reflux esophagitis such as C and D grade. The long-term use of PPI should be avoided for the treatment of non-erosive gastroesophageal reflux disease and low-grade reflux esophagitis. The long-term use of PPI will prevent ulcers from being linked to long-term NSAIDs use. The risk of ulcer recurrence may be enhanced by a previous history of ulcers, older age, heavy doses of aspirin or pain killers, and bleeding ulcers. The long-term use of PPI is a safe choice in such situations. Long-term use of PPI should be discouraged in the absence of risk. The long term use of PPI is linked to just a limited number of side effects. The research performed on adverse effects are mainly observational and retrospective, so there is no negotiable inclusion of possible bias. In such circumstances, studies that have a substantial clinical effect are meaningful and accurate. Therefore the existence of risks associated with the use of PPI in the long term is not entirely known. It is the responsibility of gastroenterologists to analyse the advantages and side effects and then to use them in everyday practice for a long time.

**CONCLUSION:**

In our research, it was found that the cause of thrombocytopenia may be proton pump inhibitors.

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