

Case Report**A Case Report on Acotiamide's Role in De-Prescribing PPI – An Offbeat Approach***V. Vishnupriya***Abstract**

Proton pump Inhibitors (PPI) are the commonest over the counter medications which are abused. Its prescribed even for minor gastric events and patients tend to take it for indefinite periods. PPI abuse can lead to wide range of toxic events like nephritis, osteoporosis, cardiac events, Clostridium infections, vitamin malabsorption. There are not many reports on management of pantoprazole abuse. Acotiamide is a drug which enhances acetylcholine release from enteric neurons through muscarinic receptor antagonism and acetylcholinesterase (AChE) inhibition, thereby enhancing gastric emptying and gastric accommodation. Here I am presenting a 36-year-old female with daily pantoprazole or omeprazole 40mg intake. She came for quitting the PPIs and was successfully managed with acotiamide and gradual tapering of the PPI.

Keywords: Acotiamide, Proton Pump Inhibitors, Deprescriptions

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Introduction

Proton Pump Inhibitors (PPIs) were first introduced in the year 1989 for the treatment of gastroesophageal reflux disease and heart burn. It has been the most sought over-the-counter (OTC) medication leading to a very high abuse potential.¹ It has got many adverse side effects like hypomagnesemia, risk of fractures, Clostridium difficile diarrhoeas, pneumonia and dementia.² Here we highlighted the role of acotiamide in PPI dependent patient.

Case Summary

A 38-year married woman, who was a secondary level teacher in a government school by occupation, hailing from the sub-urbs of Assam in India, reported with the history of daily consumption of 40mg capsule of pantoprazole or omeprazole past 12 years. It all started almost 12 years back when she started to have sudden episode of vomiting and abdominal pain for which she was prescribed intravenous pantoprazole for 2 days which was then shifted to oral pantoprazole 40mg for next 10 days. She felt better with it, there was not any abdominal pain or burning like sensation hence she continued to use it without further doctor advice. She would take either pantoprazole or omeprazole

20mg oral capsules daily. On days when she tried to skip it, she had burning like sensation, fullness, nausea and loss of appetite. Hence, she continued to use it. She has a fear that she might not be able to eat properly without the medications, her abdomen pain might start or she might vomit if she doesn't take the medications. Multiple times ultrasonography and upper gastroendoscopy done in past and all were within normal limits. She continued to work as a teacher. She never had any significant medical or surgical history. No other substance abuse. Menstrual cycle was regular.

She had frequent interpersonal conflicts with her husband because of his history of alcohol harmful use. She had a daughter who is studying in grade 6. There was not any substance use in the family. Recently she came across multiple feeds across the internet regarding the ill effects of chronic proton pump inhibitors use. She also felt that consuming any medication for a longer time without any indication might result in some damage to the liver or kidney. She realised that being a teacher, she must be a role model for her students and should give up the use of PPI. She came to the department of general medicine to seek health advice and from there she was referred to the Department of Psychiatry.

Correspondence to: Dr. V. Vishnupriya, Junior Consultant in Neuropsychiatry, GNRC Medical, North Guwahati, Assam, India. Email: vishnu27raghav@gmail.com

On mental status examination, her general appearance, attitude, and behaviour were normal, she was co-operative for the interview. There were not any thought or perceptual disturbances except being pre-occupied with the pantoprazole usage. Her thyroid, liver and kidney function tests, lipid profile, random blood glucose levels, serum calcium and prolactin levels were within normal limits. A diagnosis of abuse of non-dependence producing substance (F55) was made in accordance with the International Classification of Disease (ICD-10) with the subtype analgesic (F55.2). We planned slow tapering of pantoprazole and gradual stoppage. The schedule we followed is given below:

1st month – she was prescribed with: a) 200mg acotiamide – in divided doses, b) 40mg pantoprazole + 150 mg itopride combination, c) 25 mg dosulepin at night

2nd month – she was prescribed with: a) 20mg pantoprazole, b) 100mg itopride, c) 100mg acotiamide only in morning, d) 25mg dosulepin at night,

3rd month – she was given Itopride 50mg/day + 25mg dosulepin.

4th month – she was given 25mg itopride/day + 25mg dosulepin.

5th month – she was given 25mg itopride on alternative days + 25 mg dosulepin.

6th month – she was given half tablet of 25mg dosulepin daily for initial 15 days, then one on every alternative day for next 15 days and stopped.

Throughout the process, the patient was very cooperative; she did not have any symptoms like nausea, vomiting, abdominal pain and was able to cope well with PPI tapering.

Discussion

Dyspepsia or epigastric pain syndrome during temperance was a bothersome feature in this patient. This feature persuaded her to reuse the PPI. Acotiamide is an acetyl cholinesterase inhibitor which enhance cholinergic actions within the enteric nervous system promoting gastric emptying and accommodation ³Hence we used it as its approved in India. De-prescribing is a programmed reduction in the drug number or dose of inappropriate medications supervised by a health care professional aiming to reduce the adverse outcomes.

While de-prescribing medications discontinuing the drug, reducing dosage or “on-demand” therapy, factoring the indications and wishes of the individual can be tried ⁴. Reflux occurs due to slow transient lower oesophageal sphincter relaxations (TLERs). Acotiamide improves gastric emptying and impaired gastric accommodation by inhibiting acetylcholinesterase and antagonising the muscarinic M1 and M2 receptors. This reduces the number of TLERs. Acotiamide also reduces intragastric pressure by enhancing the colon, small intestine and duodenal contractions ⁵We never compelled our patient to stick strictly to the prescribed schedule and whenever she felt like using the PPI she was free to use. A caution note that the use should not become a habit was issued. Patient was very much motivated to stick to treatment. PPIs are available widely in capsule formulations; hence, for tapering purposes we combined it with itopride. Antidepressant medications are useful as neuromodulators in patients with chronic, refractory gastrointestinal symptoms. They modify brain’s interpretation of peripheral gut signalling. Tricyclic antidepressants have got the maximum evidence and lower doses than those used in depression has to be tied. We started a low dose of 25mg dosulepin. This case is a intriguing one because of its chronicity, acotiamide’s role and an accomplished de-prescribing within a shorter span.

Conclusion

PPI chronic usage is a poignant problem across the globe and its very high in South-east Asian countries like India where the diet is very spicy. Hazardous health complications accompany the use. There aren’t much literature data or guidelines regarding the de-prescription. This report provides a customised treatment plan for de-prescribing PPI usage with the help of novel drug acotiamide.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed. Patient’s consent was obtained, and Institutional Ethics Committee clearance was sought (EC-INS-2023-24/021).

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