

Consumer Attitude and Awareness Regarding Use of Anti-Ulcerant Drugs in Bangladesh

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Abstract: **Background:** Anti-ulcerants drugs are a class of drugs has been using to treat ulcers in the stomach and the upper part of the small intestine. Although, anti-ulcerants are beneficial in many cases, adverse effects have not gone unnoticed. **Objective:** We aimed to find out the anti-ulcerant use scenario in Bangladesh and consumers' attitude and awareness regarding the long term use of anti-ulcerants. **Methods:** This was a hospital-based cross-sectional study where 103 respondents were interviewed through convincing sampling technique. Respondents were indoor admitted patients of Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka. A questionnaire consisting 24 questions in total was developed to interview the participants. Collected data was analyzed by Statistical Package for the Social Sciences (SPSS) software. **Results:** Among 103 respondents, 50.5% were male 88 were taking anti-ulcerants 43 (41.7%) were taking medication per advice of physicians. About 63% participants are willing to continue their drugs. **Conclusion:** Evidence based practice during prescribing the antiulcerants in necessary. Consumers should make aware its side effects as well as effects of long term use of antiulcerants.

Keywords: Anti-ulcerants, drugs, Bangladesh

INTRODUCTION

Anti-ulcerants drugs are a class of drugs has been using to treat ulcers in the stomach and the upper part of the small intestine. Anti-ulcerants like Proton pump inhibitors (PPIs) inhibit the activity of pumps transporting hydrogen ions across cell membranes and are used to inhibit gastric acid secretion. It causes profound suppression of acid secretion; therefore it is used to treat gastric-associated diseases globally [1]. Its efficacy has been proved in the treatment of gastro-esophageal reflux disease (GERD), peptic ulcers and dyspepsia [2-5].

Although, anti-ulcerants relieve us from the symptoms of gastric-associated diseases, its side-effects have not gone unnoticed [1-5]. A recent study has shown that chronic ingestion of anti-ulcerants like PPIs can reduce estimated glomerular filtration rate (eGFR) in ambulatory older adults [6]. A meta-analysis has shown that acute stroke patients taking Acid-suppressive medications namely PPIs have a higher risk of being effected to Hospital-acquired pneumonia [7]. Also, PPI does not prevent the formation of anastomotic strictures [8]. Diseases like acute interstitial nephritis and pseudomembranous colitis are also consequences of prolonged use of PPI [9]. Keeping aspects of all the side-effects despites its relatively safe uses, a guideline for anti-ulcerants use is rudimentary. The National Institute for Health and Clinical Excellence (NICE) has published such sort of guideline back in 2000 [10]. The prescription PPIs without clear indication and prolonged period than recommendation have appeared to be frequent [11].

As Bangladesh is a growing economic country where pharmaceutical business is blooming day by day. Pharmaceutical industry is one of the progressive and perspective industries in Bangladesh. It contributes 1% to the country's GDP and is the third largest industry in terms of contribution to government revenue [12-17]. Anti-ulcerants are significantly dominating the huge volume sells with marked impact on company revenue. IMS 2016 shows anti-ulcerants as therapeutic class tops the whole market possessing 15% of total market share. This statistics is a testimony of huge PPI consumption in our country. Yet we still do not have clear idea whether this huge amount of PPI use is rational and per appropriate recommendation. The cost effectiveness of anti-ulcerants is also

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unclear as low price of brands are relatively less sensitive to doctors [12, 13]. In this study, we aim to find out the anti-ulcerant use scenario in Bangladesh and consumers' attitude and awareness regarding the long term use of anti-ulcerants.

METHOD

This study was a hospital-based cross-sectional study. Through convincing sampling technique, 103 participants were enrolled and interviewed for this study from January to March 2019. According to the inclusion criteria, participants were indoor admitted patients of Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka. A questionnaire consisting 24 questions in total was developed to interview the participants. In the first part of the questionnaire, socio-demographic variables of the participant were explored. This part covered questions like participant's age, gender, religion, marital status, academic qualification, job, family and monthly income. To obtain idea on anti-ulcerant consuming nature, in second part questions were asked for how long they are taking drug, mode of consumption, if they are consuming it at present, the name of the drug, any concomitant drug consumption, who prescribed anti-ulcerant, whether they were aware of the reason behind prescribing this anti-ulcerant, for how long they were supposed to take it and if they were advised to follow-up visit. To know the awareness against prolonged use of anti-ulcerant drug, questions were asked whether the participants asked the healthcare provider about the drug, whether they healthcare provider made them aware of the drug and its adverse effect of this particular drug. It was aimed to find out if the participants were willing to continue this medication and if they think they will be able to live well without consuming anti-ulcerant. Collected data was analyzed by Statistical Package for the Social Sciences (SPSS) software.

RESULT

103 participants were enrolled for this study. Mean age was 36.84 years (SD=12.923). Among them, 5 respondents were taking anti-ulcerant for 13 years. 43 respondents were advised anti-ulcerant by physicians while 13 were taking on their own. 47 respondents knew the disease that led them to taking medicine. However, 23 respondents do not know whether they have to go to physicians for follow-up. Despite that, most of the participants (n=65) are willing to continue their drugs. Most of the respondents (57, 55.3%) do not believe that modifying lifestyle will change their disease condition.

Table-1: Distribution of demographic variables among the respondents (n=103)

Variable	n	%
Age in years		
10-20	30	30
21-30	59	59
31-40	6	6
41-50	4	4
51-60	1	1
61-70	4	4
71-80	1	1
Gender		
Male	52	50.5
Female	51	49.5
Religion		
Islam	93	90.3
Hindu	10	9.7
Marital status		
Unmarried	16	15.5
Married	85	82.5
Widow	2	1.9
Educational qualification		
Illiterate	13	12.6
Primary education	26	25.2
SSC	32	31.1
HSC	19	18.4
Graduate & others	13	12.6
Occupation		
Unemployed	13	12.6
Farmer	6	5.8
Housewife	30	29.1
Businessman	21	20.4
Govt Service	11	10.7
Non-govt-service	8	7.8
Others	14	13.6
Type of family		
Nuclear	83	80.6
Joint	20	19.4

Table-2: Consumption pattern of respondents

Variable	n	%
Antiulcerant taking		
Yes	88	85.4
No	15	14.6
Type of consumption		
Regular	43	41.75
Irregular	45	43.69
Missing	15	14.56
Name of the antiulcerant		
PPIs	60	58.1
H2 bloker	21	20.4
Analgesic taking	46	44.7
Whom advice they follow		
Self	13	12.6
LMFA	17	16.5
Salesman	12	11.7
Physician	43	41.7
Relatives	1	1
Others	2	1.9
Total	88	85.4
Want to know of reason		
Yes	24	23.3
No	64	62.5
Missing	15	14.6
Prior awareness		
Yes	18	17.5
No	70	68
Missing	15	14.6
Willing to continue medicine		
Yes	65	63.1
No	22	21.4
Missing	16	15.5
Know side effects		
Yes	26	25.2
No	61	59.2
Missing	16	15.5

DISCUSSION

Proton-pump inhibitors (PPI) is a time-tested drug for effective suppression of gastric acid and is indicated in several upper gastro-intestinal disorders [13]. Diseases like Gastro-esophageal Reflux Disease, peptic ulcer and dyspepsia are treated using anti-ulcerantlikePPIs [2-5, 13]. As ulcers can be happened in high-risk patients taking Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) and also patients receiving glucocorticoids for prolonged duration, PPIs are being used as a concomitant treatment [19]. Although, PPIs are beneficial in many cases, adverse effects have not gone unnoticed. Long-term use of PPIs can lead to reduced eGFR, hospital acquired pneumonia, acute interstitial nephritis, pseudomembranous colitis [6-9, 13]. Despite the risk of imminent adverse effects, PPI medication have been experiencing blooming in term of expenditure. In United Kingdom, in term of expenditure, they are the single largest drug group [19]. Germany experienced an annual expenditure of \$1.2 billion in 2010 and globally the cost was £7 billion [20]. From different studies, it was found that Bangladesh is not an exception. Recent tradition shows, anti-ulcerants as a therapeutic class tops the whole market with 15% of the total market share and according to brand-wise ranking based on sales volume, among the 25 available brands, there are 11 anti-ulcerant brands with the top 4 anti-ulcerant brands [21]. It can be therefore said that the consumption of anti-ulcerants are increasing continuously. In this study, we investigated the attitude and consciousness level of the consumers taking anti-ulcerants. Gender was nearly equally distributed among the 103 participants who were mostly middle-aged and married. Omeprazole was taken by the largest cohort and the largest group who were taking this drug was for 5 years. A large group was founded to be housewives. Though the participants were taking it for a prolonged period, they were consuming it irregularly. Reason behind the consumption was largely based on gastric pain and 46 participants were also taking analgesic in addition. However, most of the participants were unaware of the disease they were suffering from though a large number of them were prescribed by the physicians. Most of the participants did not ask about the drug and did not know if they require a follow-up visit. Lack of prior awareness before medication and subsequent adverse effect risk can in long term deteriorate doctor-patient relationship as it has been proven that there is extreme paucity of literatures on doctor-patient relationship in Bangladesh [22]. Despite the unawareness of the side-effects, a large number of participants were unwilling to give up consuming and willing to continue anti-ulcerants as medication. It is also firm belief of the most respondents, without consumption of anti-ulcerants, it would not be possible to lead a modified, controlled life-style and limit the disease condition. Irrational use of anti-ulcerant consumption can also be

seen in many parts of the globe. A longitudinal analytic study on inpatient care with inpatient stress ulcer prophylaxis claims data in 29,348 commercial and Medicare patients with an acute care hospital admission and subsequent discharge on a PPI determined that 69% were prescribed a PPI inappropriately at discharge [23].

RECOMMENDATIONS

Anti-ulcerants will remain to be the first choice of treatment option in patients with upper GI conditions. Although, in most cases, the patients are unaware of the necessity of this drug despite in most cases it was recommended by physicians. It is rudimentary to let know the patients of the duration of intake, side effects of irrational and prolonged use of anti-ulcerants. Follow-up visits should be made obligatory to be aware of the anti-ulcerants consumption rate. The patients should also be taught that it is possible to eliminate the upper GI conditions by maintaining a healthy, controlled and modified life-style. Thorough, organized, cumulative approach can be initiated to address this situation.

LIMITATIONS

The survey was limited to 103 participants who were admitted in Bangabandhu Sheikh Mujib Medical University (BSMMU). Therefore, the actual scenario of the country as a whole was unable to obtain. Country-wide research can be conducted can be incepted to get to know about the whole situation.

CONCLUSIONS

Anti-ulcerants has dramatically changed the treatment difficulties of upper GI conditions and helped to alleviate the symptoms thus relieving the patients from disease burden. However, this anti-ulcerants cannot be considered as an unmixed blessing. Through different studies, different adverse effects have been proven due to its prolonged and irrational use. Therefore, a national guideline should be introduced for prescription and medication. Also, a country-wide large, randomized study is needed to be conducted to know the real-time scenario of anti-ulcerants consumptions. Patients should also be taught, not only can anti-ulcerants but also controlled, modified life-style can reduce the symptoms.

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