



Inappropriate Prescribing of Proton Pump Inhibitors in Children: Insights from a Survey

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To the Editor: Proton pump inhibitors (PPIs) are one of the most widely prescribed medications world-wide [1]. The Food and Drug Administration (FDA) has approved PPIs for a limited number of indications but inappropriate prescribing is rampant amongst adults [1, 2]. Inappropriate prescribing does not come without problems as side-effects like infections, especially clostridium difficile, micronutritional deficiencies, fractures, renal impairment, and cardiovascular risks have been linked to PPI use [3].

We evaluated the prevalence and appropriateness of PPI use in the pediatric population presenting to our tertiary referral hospital over 2 mo (1st November–31st December 2020). All admitted children who had been prescribed PPIs by their referring physicians were identified and the appropriateness of the prescription was compared with FDA-approved indications. We evaluated 250 children, of which, 101 (40.4%, mean age 11 ± 6 y, 57 male) had been prescribed PPIs prior to admission (mean duration 25 ± 9 d). In only 14 (13.8%), PPIs were given for FDA-approved indications.

PPI use has increased steadily and there are growing concerns of their overutilization. We found that 86.2% children were prescribed PPIs inappropriately with co-prescription with steroids or NSAIDs ($n=29$, 28.7%) being the commonest reason. It is a common practice to co-prescribe PPIs with steroids, with the assumption that it decreases steroid-related peptic ulcer disease. However, the incidence of steroid-related gastrointestinal bleeding is low ($\sim 0.13\%$) in an ambulatory setting obviating the need for routine prophylaxis [4]. The practice of routinely co-prescribing PPIs with NSAIDs is also not evidence-based [3]. Guidelines recommend that only high-risk individuals, i.e., those with a history of ulcer bleeding, old age or comorbid illness, conditions rarely encountered in children,

should receive PPI prophylaxis. Alarming, 58.4% of those who had been prescribed a PPI did not have any identifiable comedication or diagnosis that could possibly warrant a PPI, suggesting that a number of physicians add PPIs to their prescriptions in a blanket manner.

A limitation of our study is that, as we evaluated only admitted patients, the results may not be generalizable to the entire ambulatory population. Some patients did not have all their previous prescriptions and it is conceivable that we have underestimated the problem.

To conclude, inappropriate prescription of PPIs is highly prevalent. Efforts should be made to promote rational use of the drug.

Declarations

Conflict of Interest None.

References

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