

## Prescrição de Inibidores da Bomba de Protões na Admissão e Alta numa Enfermaria de Medicina Interna

### *Proton Pump Inhibitors Prescription at Admission and Discharge in an Internal Medicine Ward of a Portuguese Tertiary Hospital*

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**Keywords:** *Inappropriate Prescribing; Proton Pump Inhibitors/therapeutic use.*

The article published by Jorge *et al*<sup>1</sup> presented the indications for the use of proton pump inhibitors (PPI) in a medical ward within a period of 5 months in an internal medicine department of a university district hospital. The authors concluded that 76.4% of patients (305 out of 567 patients) were on PPI and of the 305 PPI consumers, only 23.4% (n = 72) presented a formal criterion for the use of this medication (according to methodology used by the authors).

We performed a similar analysis in our inpatient unit, in a central university hospital, during a 12-month period. We analyzed medication at admission and at discharge from the medical ward.

The data gathered from the medical records included: demographic data, whether the patient was on PPI prior to the admission and at discharge; whether there was an explicit formal indication for such prescription and which, according to the Portuguese Directorate General of Health Recommendations.<sup>2</sup>

A total of 542 patients were included, with a total of 58.1% women and 41.9% men and the mean age was 78.7 years.

Forty seven percent (47.2%) of patients were on PPI at the admission date and increased to 55.4% at discharge. In our data, only 8.6% patients at admission and 10.7% at discharge presented a formal disease indication to be on PPI – Fig. 1.

Comparing our results with Jorge *et al*, we found that in our sample less patients were on PPI (76% vs 55%), but more of them presented a formal disease indication to be on PPI (23% vs 11%).

This difference could be related to heterogeneous methodology used. Jorge *et al* defined a broader list of indication/risk factors to use PPI, such as diabetes, cardiovascular disease or kidney disease. We followed a stricter indication according to Portuguese Directorate General of Health Recommendations.<sup>2</sup>

We believe that this lack of justification to prescribe PPI may reside on physicians' misperceptions on PPI safety, an idea supported by the launched campaign by INFARMED in 2017, alerting to the increased expense due to PPI prescription and to the pathologies and periods of treatment already studied and established for this drug-class.<sup>3</sup>

However, besides the different magnitude of the results both studies point out to the importance of improving prescription of PPI in internal medicine wards as inappropriate use of PPI continues to be a reality in clinical practice.

Intervention and education of healthcare professionals is efficient in addressing inappropriate PPI prescription.<sup>4</sup> In a 2006 study by Liberman *et al*<sup>5</sup> a fall in inappropriate stress ulcer prophylaxis with PPI was confirmed after a practice-based educational intervention, from 59% to 33% after a 6-month follow-up, with the inappropriate prescription at discharge falling from 25% to 7%. Thus, and bearing in mind the INFARMED campaign, we suggest that educational interventions among physicians in Internal Medicine wards and implementing hospital internal guidelines on PPI prescription should greatly reduce the over prescription of these drug-class, providing high-value and cost-conscious care.

In conclusion, PPIs are commonly overprescribed in our tertiary teaching hospital. Almost a third of our sample had no explicit justification for PPI prescription. This should raise awareness to physicians to re-think prescription benefit of PPI and/or clarify the reasons why they should be continued after discharge. ■

#### **Declaração de Contribuição / Contributorship Statement:**

Francisca Torres Sarmento – Ideia, Escrita do manuscrito, Revisão crítica do conteúdo, Aprovação de manuscrito final.

José Almeida Correia – Ideia, Recolha de dados, Análise e Interpretação de dados, Escrita e aprovação final do manuscrito.

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### REFERENCES:

1. Jorge C, Tuna C, Carlos P, Ferreira S, Gonçalves R, Louro M. Indicações Terapêuticas e Profiláticas de Uso de Inibidores da Bomba de Protões e Prescrição Inadequada. *Rev Port Med Interna*;29:8-12.
2. Direção Geral de Saúde. Norma da Direção Geral de Saúde sobre Supressão Ácida [Internet]. [cited 2022 Apr 4]. Available from: <https://www.dgs.pt/directrizes-da-dgs/normas-e-circulares-normativas/norma-n-0362011-de-30092011-jpg.aspx>
3. INFARMED. Campanha IBP - Visa alertar para os riscos dos medicamentos para a acidez do estômago [Internet]. 2017 [cited 2022 Mar 26]. Available from: <https://www.infarmed.pt/documents/15786/1879176/Comunicado%2b-%2bCampanha%2bIBP/bb11fdf6-cb41-408a-a186-99bca397fc46>
4. Scagliarini R, Magnani E, Praticò A, Bocchini R, Sambo P, Pazzi P. Inadequate use of acid-suppressive therapy in hospitalized patients and its implications for general practice. *Dig Dis Sci*. 2005;50:2307-11. doi: 10.1007/s10620-005-3052-4.
5. Liberman JD, Whelan CT. Brief report: Reducing inappropriate usage of stress ulcer prophylaxis among internal medicine residents. A practice-based educational intervention. *J Gen Intern Med*. 2006;21:498-500. doi: 10.1111/j.1525-1497.2006.00435.x.