ORT_05 - Spatial-temporal patterns in biologic prescriptions for inflammatory bowel diseases in the public healthcare system in Brazil

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Introduction: Biologics are increasingly being used worldwide to manage inflammatory bowel diseases (IBD), but research on their prescription patterns in Latin America is limited. Investigating this topic can help identify knowledge gaps and ultimately contribute to the better management of these diseases. Moreover, differences in biologic prescriptions can hinder efforts to minimize the disease burden.

Objectives: To analyze the spatial and temporal patterns of biologic prescriptions for IBD in Brazil's public national unified health system (SUS).

Methodology: This ecological study utilized information from individuals with Inflammatory Bowel Disease (IBD) in the SUS Outpatient Information System from 2008 to 2022. The Prais-Winsten regression method was employed to determine the trends in biologic prescription rates. To analyze the data spatially, the biologic prescription rates were calculated for each municipality during three different periods: 2008-2012, 2013-2017, and 2018-2022. Moran's global index (GMI) and local spatial autocorrelation index (LISA) were utilized to evaluate the spatial autocorrelation and identify spatial clusters of biologic prescriptions, respectively.

Results: The rate of biological prescriptions has increased from 3.0% to 16.7%. Infliximab was the most frequently prescribed medication from 2008 to 2012 (3.0%–4.2%), while adalimumab held that distinction from 2013 to 2022 (4.3%–9.1%). A higher rate of biological prescriptions was observed in patients with Crohn's disease than in those with ulcerative colitis (40.5% vs. 3.2%, respectively). During the three periods evaluated, changes in the spatial distribution of biological prescriptions and an increase in clusters of high prescriptions were identified.

Conclusion: The rise in the use of biologic medications could be attributed to their growing effectiveness in achieving and sustaining remission for IBD. Moreover, the ease of administering adalimumab through subcutaneous injection could be a contributing factor to its recent increased usage compared to infliximab.

Keywords: Inflammatory Bowel Diseases; Biologic Drugs; Drug Prescriptions