

Levodopa: prescription errors in the use of antiparkinsonian drugs

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Introduction: The introduction of levodopa (LD) in 1960 revolutionized the management of Parkinson`s disease (PD). As it is a drug with few indications (PD, dystonia, and other movement disorders) it facilitates identification of associated prescription mistakes which are frequent in general practice. No study has analyzed levodopa prescription errors but drug warning letters have been reported since 1971. Methods: A cross-sectional study was conducted using de-identified administrative data of two Colombian Health Maintenance Organizations (HMO). 4.306.042 subjects were included from a two year period (2014-2015). To identify PD patients a filter using ICD-10 (G20X,G258,G259,F023) and levodopa ATC codes (N04BA01,N04BA02,N04BA03) was applied. All subjects with at least 1 code were included. A descriptive analysis of the drug prescription relevance was carried out. Results: 4952 PD patients were included. Age median was 72 years (IQR: 62-80). 90.33% of the sample were 50 years or older. 3627 subjects had Levodopa prescription, of these 58.7% had at least one inclusion diagnosis associated and 0.77% had dystonia (ICD-10:G24). These prescriptions were considered "adequate". 692 patients (13.79%) with levodopa but without ICD-10 code diagnosis were considered as "inadequately prescribed". The most common diagnoses associated with levodopa misprescription were: Non-specific diagnosis (ICD-10: R688, R69, Z) 64.60%, hypertension 10.84%, other neurological disorders 9.54%. Formulation errors were more frequent in women (15.7% vs 13.44%) and patients younger than 50 years (50.24% vs 18.03%), 4 pregnant patients were misprescribed instead of methyl dopa. Conclusion: A high proportion of patients receive levodopa without having an adequate ICD-10 diagnosis that justifies the prescription.