



ORIGINAL ARTICLE

Drug utilisation study in patients receiving antiepileptic drugs in Colombia^{☆,☆☆}



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KEYWORDS

Antiepileptics;
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Abstract

Introduction: This study examines the indications according to which antiepileptic drugs are prescribed and used in a population of patients enrolled in the Colombian national health system (SGSSS).

Methods: Retrospective cross-sectional study. From the pool of individuals in 34 Colombian cities who used antiepileptic drugs between 18 July 2013 and 31 August 2014 during a period of no less than 12 months, we obtained a random sample stratified by city. Socio-demographic, pharmacological and comorbidity variables were analysed. Continuous and categorical variables were compared, and logistic regression models were used.

Results: Our patient total was 373 patients, with 197 women (52.1%) and a mean age of 41.9 ± 21.7 years; 65.4% of the patients were treated with monotherapy. The most frequently used drugs were valproic acid (53.1%) and carbamazepine (33.2%). Epilepsy was the most frequent indication ($n = 178$; 47.7%); however, 52.3% of the patients were prescribed antiepileptics for different indications, especially neuropathic pain (26.8%), affective disorders (14.2%) and migraine prophylaxis (12.3%). A total of 81 patients with epilepsy (46.6%) displayed good seizure control while another 25 (14.4%) had drug-resistant epilepsy. In the multivariate analysis, medication adherence was associated with a lower risk of treatment failure in patients with epilepsy (OR: 0.27; 95% CI: 0.11-0.67).

Conclusions: In Colombia, antiepileptic drugs are being used for indications other than those originally intended. Monotherapy is the most commonly used treatment approach, together with the use of classic antiepileptic drugs.

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PALABRAS CLAVE

Antiepilépticos;
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Colombia

Estudio de prescripción-indicación en pacientes que reciben antiepilépticos en Colombia

Resumen

Introducción: Determinar las indicaciones por las cuales se prescriben y utilizan antiepilépticos en una población de pacientes afiliados al Sistema General de Seguridad Social en Salud (SGSSS) de Colombia.

Métodos: Estudio retrospectivo de corte transversal. A partir de todos los individuos que utilizaron antiepilépticos entre el 18 de julio de 2013 y el 31 de agosto de 2014 en 34 ciudades colombianas durante un periodo no inferior a 12 meses, se realizó un muestreo aleatorizado estratificado por ciudades. Se analizaron variables sociodemográficas, farmacológicas y comorbilidades. Se compararon variables continuas y categóricas, y se realizaron modelos de regresión logística.

Resultados: De un total de 373 sujetos, se hallaron 197 mujeres (52,1%); el promedio de edad fue de $41,9 \pm 21,7$ años; predominó la monoterapia en el 65,4% de los pacientes. Los medicamentos más utilizados fueron ácido valproico (53,1%) y carbamazepina (33,2%). La epilepsia fue la indicación más frecuente ($n = 178$; 47,7%); sin embargo, en el 52,3% de pacientes se utilizaron para indicaciones diferentes, especialmente dolor neuropático (26,8%), trastornos afectivos (14,2%) y profilaxis de migraña (12,3%). Un total de 81 pacientes con epilepsia (46,6%) estaban en control sintomático, mientras otros 25 casos (14,4%) presentaban epilepsia resistente a fármacos. En el análisis multivariado la adherencia al tratamiento se asoció con menor riesgo de fracaso terapéutico en pacientes con epilepsia (OR: 0,27; IC 95%: 0,11-0,67).

Conclusiones: Los fármacos antiepilépticos en Colombia se están utilizando en indicaciones diferentes para las que fueron inicialmente diseñados. La monoterapia es la estrategia terapéutica más empleada, al igual que el uso de medicamentos clásicos dentro del grupo.

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Introduction

Antiepileptic drugs are the cornerstone of epilepsy treatment; around 70% of patients with this disorder become seizure-free with medication and can lead a normal life with no adverse drug events.¹

Antiepileptic drugs can be classified either chronologically, as conventional (first-generation) or new (second- and third-generation) drugs, or by their action mechanism. However, the latter classification may be challenging since many of these drugs act via more than one action mechanism, including blocking sodium and calcium channels, enhancing GABA activity, reducing excitation mediated by NMDA (glutamate) receptors, and inhibiting neurotransmitter release.²⁻⁴ Due to their multiple mechanisms of action on the nervous system, these drugs are frequently used for conditions other than epilepsy.^{3,5}

The Food and Drug Administration (FDA) recently approved use of these drugs for treating several forms of chronic and neuropathic pain, such as trigeminal and postherpetic neuralgia, fibromyalgia, migraine, and multiple psychiatric disorders including bipolar affective disorder. In addition, despite not having FDA approval for these uses, antiepileptics have been proved effective for treating hyperkinetic movement disorders, schizophrenia, drug addiction, autism, tinnitus, and others.^{3,5}

Approximately 40% of patients taking antiepileptics may experience adverse drug effects; this is a major cause of treatment failure not only because patients abandon

treatment in early stages but also because adverse effects affect adherence, resulting in failure to reach the desired effect of full doses.⁶

In this context, and considering that there are no studies on antiepileptic use in Colombia, we aimed to determine how these drugs are actually used. Here, we analyse such variables as reason for prescription, dose, adherence, changes in pharmacological treatment, types of reported adverse effects, and results of pharmacological treatment (effectiveness). Our purpose was to provide a deeper knowledge of antiepileptic use in Colombia, which may be of help in developing programmes that achieve better treatments and appropriate use of antiepileptic drugs.

Materials and methods

We conducted a retrospective cross-sectional study of the reasons for prescribing antiepileptic drugs in Colombia. We included data from all patients registered with a health insurance provider (HIP) and affiliated with the Colombian health and social security system (SGSSS). Patients had been receiving antiepileptics for at least 12 months and were seen by a doctor between 18 July 2013 and 31 August 2014 in one of 34 Colombian cities, including Barranquilla, Bogotá, Bucaramanga, Cali, Cartagena, Ibagué, Manizales, Medellín, Pereira, and Santa Marta.

Randomised sampling stratified by city was conducted based on a total of 12 736 patients receiving treatment to

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