BRIEF COMMUNICATION

Increase in Mexican and Latin American scientific articles on irritable bowel syndrome∗

R. Porras a, A. López-Colombo b, M. Schmulson a,∗

a Laboratorio de Hígado, Páncreas y Motilidad (HIPAM), Unidad de Investigación en Medicina Experimental, Facultad de Medicina, Universidad Nacional Autónoma de México (UNAM), Hospital General de México, Mexico City, Mexico

b Dirección de Educación e Investigación en Salud, Unidad Médica de Alta Especialidad (UMAE), Hospital de Especialidades Centro Médico Nacional Manuel Ávila Camacho, Instituto Mexicano del Seguro Social (IMSS), Puebla de Zaragoza, Puebla, Mexico

Received 6 May 2015; accepted 11 June 2015
Available online 11 September 2015

KEYWORDS
Irritable bowel syndrome; Epidemiology; Mexico; Latin America; Research; Articles

Abstract
Background: There is an implied perception that little scientific information on irritable bowel syndrome (IBS) comes out of Mexico and Latin America in the international medical literature, but the number and tendencies of articles from the region on IBS are not known.

Aims: To determine the number and type of Mexican and Latin American articles on IBS published between 1990-2015.

Methods: A systematic search of Medline was carried out employing the terms »Irritable Bowel Syndrome« or its abbreviation (IBS). Mexico and every other Latin American country were added to specify the search. The articles were selected if they were published in Mexico and/or the rest of Latin America, if they were international papers on IBS in the region, or if they were written by Mexican and/or Latin American authors. In addition, the articles were classified into the following categories: Review Articles/Editorials/Letters to the Editor (REV/ED), studies emphasizing aspects of Epidemiology/Quality of Life/Psychosocial Factors (EPI/QOL), articles dealing with Diagnoses (DX), with Treatment (TX), and Translational/Pathophysiologic studies (TRANS).

Results: A total of 66 articles from Mexico and 47 from Latin America were identified, but only 87.7 and 48.9%, respectively, fit the selection criteria. Category distribution was: EPI/QOL: 36.2%, REV/ED: 27.5%, TRANS: 18.8, TX: 10%, and DX: 7.5% and was similar between Mexico and Latin America.


∗∗ Corresponding author. Laboratorio de Hígado, Páncreas y Motilidad (HIPAM), Unidad de Investigación en Medicina Experimental, Facultad de Medicina, Universidad Nacional Autónoma de México (UNAM), Hospital General de México, Dr. Balmis #148, Col. Doctores C.P. 06726, México D.F. México. Tel.: +52 5556232673; fax: +52 5556232669.

E-mail address: maxjulio@prodigy.net.mx (M. Schmulson).

2255-534X/© 2015 Asociación Mexicana de Gastroenterología. Published by Masson Doyma México S.A. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Increase in Mexican and Latin American scientific articles on irritable bowel syndrome

Introduction

There is an implied perception of low scientific production in the field of functional gastrointestinal disorders, and especially irritable bowel syndrome (IBS), in Latin America. In fact, a systematic review of the medical literature on the overall prevalence of IBS based on open population studies concluded that there is a lack of studies on the prevalence and epidemiologic characteristics of this disorder, especially from Central America, and that there are few studies from South America. The review only identified 4 South American articles, one of which was not really an open population study. This is important, given that IBS has a reported incidence of 9-16% and is among the 5 most frequent gastrointestinal disorders.

Conclusions: A noticeable increase has been observed over the last decade in the research conducted on IBS in Mexico and Latin America. Even though the EPI/QOL studies predominate, the sophistication of research is reflected in the TRANS studies that are in third place of frequency. The information referred to herein demonstrates maturity in the field, making it possible to carry out consensuses based on local data.

© 2015 Asociación Mexicana de Gastroenterología. Published by Masson Doyma México S.A. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

PALABRAS CLAVE
Síndrome de intestino irritable; Epidemiología; México; Latinoamérica; Investigación; Artículos

Incremento en las publicaciones científicas sobre síndrome de intestino irritable en México y Latinoamérica

Resumen

Antecedentes: En la literatura internacional se crea la idea de que la información científica sobre el síndrome de intestino irritable (SII) en México y Latinoamérica es escasa. Sin embargo, se desconoce el número y la tendencia de las publicaciones sobre SII en la región.

Objetivo: Determinar el número y tipo de publicaciones sobre SII en México y Latinoamérica entre 1990-2015.

Métodos: Búsqueda sistemática en Medline empleando los términos «síndrome de intestino irritable» y su abreviatura (IBS) en inglés, cruzándolo con México y cada país de Latinoamérica. Los artículos se seleccionaron según hubieran sido publicados en México y/o Latinoamérica; publicaciones internacionales sobre SII en la región o por autores mexicanos y/o latinoamericanos. Además se clasificaron en categorías: Revisión/Editorial/Cartas al Editor (REV/ED), Epidemiología/Calidad de vida/Factores psicosociales (EPI/QOL), Diagnóstico (DX), Tratamiento (TX), Traslacional/Fisiopatología (TRAS).

Resultados: Se identificaron 66 publicaciones de México y 47 de Latinoamérica pero solo un 87.7% y un 48.9% respectivamente se ajustaron a los criterios de selección. La distribución de categorías fue: EPI/QOL, 36.2%; REV/ED, 27.5%; TRAS, 18.8; TX, 10%; DX, 7.5%; similar entre México y Latinoamérica (p = 0.33). Las publicaciones se incrementaron a partir del 2005 con un pico en 2010 en México, y se mantuvieron estables a lo largo de los años con un pico en 2012 en Latinoamérica.

Conclusión: En la última década se observa un aumento notorio en la investigación sobre SII en México y Latinoamérica. Si bien predominan los estudios EPI/QOL, la sofisticación se refleja en los TRAS que ocupan el tercer lugar. Lo anterior demuestra una madurez que permite realizar consensos basados en datos locales.

© 2015 Asociación Mexicana de Gastroenterología. Publicado por Masson Doyma México S.A. Este es un artículo Open Access bajo la licencia CC BY-NC-ND (http://creativecommons.org/licenses/by-nc-nd/4.0/).
the search was repeated with the names of each of the Latin American countries. Two of the present authors (RP, MS) individually reviewed the abstracts of each of the identified articles, and when necessary, the complete article, to corroborate that they met the selection criteria. Said criteria were: 1) Articles on IBS published in Mexico and/or Latin America, and/or 2) International articles that referred to IBS in the region, and/or 3) Articles on IBS written by Mexican and/or Latin American authors. The same 2 authors then met to jointly decide which articles fit the selection criteria; they excluded articles that were not really about IBS, articles that were about IBS, but not from Mexico or Latin America, or articles that were not written by authors from the region. In addition, the articles were classified into 5 categories: Reviews/Editorials/Letters to the Editor (REV/ED), Epidemiology/Quality of Life/Psychosocial Factors (EPI/QOL), Diagnostic (DX), Treatment (TX), and Translational/Pathophysiologic (TRANS) studies. In the results, the articles are described by year, the country of the authors, and the corresponding categories. The frequency of the categories was compared between Mexico and Latin America. The mean number of articles was described per year. A graph was plotted with the number of articles per year to determine if there was an increase in the publications within the time frame of interest, separating Mexico from the rest of Latin America. The results were expressed as frequencies and the comparisons were made using the Fisher exact test. Statistical significance was set at a $p < 0.05$.

**Results**

A total of 66 publications from Mexico and 47 from the rest of Latin America were identified. Of the former, 57 (87.7%) met the selection criteria, and of the latter, 23 (48.9%). Table 1 shows the articles according to the different categories in the following order of frequency: EPI/QOL, 36.2%; REV/ED, 27.5%; TRANS, 18.8%; TX, 10%; and DX, 7.5%. There were no differences in the categories between Mexico and Latin America: EPI/QOL, 42.1% vs 21.3%; REV/ED, 24.5% vs 34.8%; TRANS, 19.3% vs 17.4%; TX, 7.0% vs 17.4%; DX, 7.0% vs 8.7%; $p = 0.33$.

In Mexico approximately 3 articles/year were published on IBS, starting from 1997, whereas in the rest of Latin America 1.5/year were published starting from 2001. Furthermore, in 2005, there was an increase of 84.2% in the number of articles published in Mexico, reaching a peak in 2010 (fig. 1). In the rest of Latin America, even though the majority of articles (82.6%) were published starting from 2005, this remained stable through the years, with a peak in 2011. No references were found for 2014 (fig. 1).

**Discussion**

In the present review using the Medline database, we identified an increase in publications on IBS in Mexico and the rest of Latin America, mainly from 2005-2010. Nevertheless, it should be noted that over twice as many articles were published in Mexico, compared with the other countries of the region. The most frequent articles were those related to epidemiologic aspects, quality of life, and psychosocial aspects.

Even though we identified an important number of articles on Medline, it should be mentioned that there is a publication bias in that database. For example, there are articles published in local journals with well conducted epidemiologic studies that are not cited. Such is the case of a Uruguayan study, as well as a Venezuelan study on IBS prevalence. We also observed in the search that letters to the editor and even recent editorials on IBS published in journals that are referenced in Medline were not identified. Therefore in order to carry out an adequate review on IBS in Mexico and Latin America it is necessary to analyze other databases, such as BIREME/Lilacs or SciELO.

With respect to the categories of the articles, it was not surprising to find that the majority corresponded to epidemiologic studies and articles on quality of life and psychosocial factors, perhaps because they are the simplest to conduct and generally only require the application of questionnaires. On the other hand, grouping these 3 aspects into a single category can explain its greater number of articles. To our surprise, the translational and pathophysiologic articles that require specialized laboratory techniques and researchers, and that would have been thought to be less frequent, were third place in frequency. This indicates the ever-increasing sophistication of research in this field in Mexico and Latin America. It should also be mentioned that some of the review articles are collaborations between authors from Latin America and other parts of the world. This suggests the growing importance and leadership at the international level of certain Latin American researchers in the field of IBS.

Finally, the higher scientific production in regard to IBS in Mexico than in the other Latin American countries should also be noted. This is most likely due to the fact that there are greater funding for research in Mexico, and especially the fact that those physicians and basic scientists in academia are gaining more recognition and better-paying jobs. Such resources appear to be scarcer in the other Latin American countries, and the effort that persons in those countries must make to carry out research and publish deserves to be recognized.
### Table 1  Mexican and Latin American articles on IBS according to categories.

<table>
<thead>
<tr>
<th>Article</th>
<th>Country</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huerta I, Bonder A, López L, Ocampo MA, Schmulson M. [Differences in the stress symptoms rating scale in Spanish between patients with irritable bowel syndrome (IBS) and healthy controls]. Rev Gastroenterol Mex. 2002;67:161-5.</td>
<td>UK</td>
<td>EPI/QOL</td>
</tr>
<tr>
<td>Montes R, Monge E. Lactose malabsorption and IBS. Scand J Gastroenterol. 2004;39:1033;</td>
<td>Peru</td>
<td>REV/ED</td>
</tr>
<tr>
<td>Mangel AW. Postinfectious IBS. Am J Gastroenterol. 2005;100:729.</td>
<td>USA</td>
<td>EPI/QOL</td>
</tr>
<tr>
<td>Article</td>
<td>Country</td>
<td>Category</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>Awad RA, Camacho S, Martín J, Ríos N. Rectal sensation, pelvic floor function and symptom severity in Hispanic population with irritable bowel syndrome with constipation. Colorectal Dis. 2006;8:488-93.</td>
<td>Mexico</td>
<td>EPI/QOL</td>
</tr>
<tr>
<td>Article</td>
<td>Country</td>
<td>Category</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Rodríguez-Fandiño O, Hernández-Ruiz J, Schmulson M. From cytokines to toll-like receptors and beyond - current knowledge and future research needs in irritable bowel syndrome. J Neuрогastroenterol Motil. 2010;16:363-73.</td>
<td>Mexico</td>
<td>TRANS</td>
</tr>
</tbody>
</table>
Table 1 (Continued)

<table>
<thead>
<tr>
<th>Article</th>
<th>Country</th>
<th>Category</th>
</tr>
</thead>
</table>
In conclusion, there has been an important increase in articles on IBS in Mexico and Latin America over the past years, reflecting the ever-growing maturity in the region in this field, making it possible for us to have consensuses based on our own information. Additionally, in order to carry out adequate and unbiased systematic reviews, searches should also include local repositories.

Financial disclosure

No financial support was received in relation to this study.

Conflict of interest

The authors declare that there is no conflict of interest.

References