LETTERS TO THE EDITOR

Bilingual edition English/Spanish

Comments on the Anticholinergic Burden Calculator Web Tool

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Dear Editor:

We have read with interest the letter of Villalba-Moreno et al. that your journal published in 2017. The authors should be commended for the development of the Anticholinergic Burden Calculator Web Tool, a valuable contribution that will raise awareness of the risks of using antimuscarinic drugs worldwide.

The calculator (available at: https://www.anticholinergicscales.es, and accessed on 28/5/2019) is based on ten different anticholinergic scales identified in a systematic review. Drugs included and rating of anticholinergic effect given differ widely across different published lists. This inconsistency was first highlighted back in 2013 in a study carried out in a medium- and long-stay psychiatric hospital, where poor agreement among them was shown. Later that year, our team outlined the importance of adapting scales to local settings and updating data to include new drugs.

In the reference section of the Anticholinergic Burden Calculator, the authors mention an update of the Anticholinergic Drug Scale (ADS) in 2013, but as far as we are concerned, the list, created in the United States (USA) in 2006, hasn’t been updated. Curiously, some of the examples we used in 2013 (biperiden, fesoterodin, solifenacin) appear in the calculator citing the ADS scale. But these drugs were not considered in the original publication. Biperiden, for example, is not available in the USA. We believe the inclusion of biperiden, fesoterodin and solifenacin is a wise choice, as these drugs undoubtedly possess anticholinergic activity. But, if what we believe is confirmed, the reference in the calculator should be corrected.

Developing a consistent, updated and accessible screening tool to measure anticholinergic burden should be a priority for the scientific community. In this sense, we look forward to the improvement of the web tool, adding specific recommendations to help clinicians make better decisions.

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Bibliography


REPLY

Villalba-Moreno AM, Alfaro-Lara E, Santos-Ramos B, Sánchez-Fidalgo S

Dear Domingo-Echaburu et al.

First of all, I would like to express my gratitude for your contribution to anticholinergic burden, in your case, for psychiatric patients. Your scientific research is valuable for improving understanding of the variability between anticholinergic scales according to the type of patient studied.

We have reviewed your comment about Anticholinergic Drug Scale (ADS) update and you are correct. There was indeed an update of this scale in 2013, but unfortunately, it has not yet been published in the scientific community. Our research group contacted the author of the ADS scale, Ryan Carnahan. He sent us the latest version of the ADS as an attached file with important changes in anticholinergic drugs. We decided to add it to the Anticholinergic Burden Calculator after the author had given his consent due to the significant changes it makes, such as the inclusion of biperiden, fasestorodin and solifenacin, drugs with high anticholinergic potential. Recommendations to interpret the results obtained with the ADS scale have also been tested/approved. For Carnahan et al, it is important to focus on level 2 and 3 drugs as those with potentially clinically significant anticholinergic properties. They are fairly skeptical of level 1 drugs and the evidence on which those ratings are based. The side-effect profiles do not really suggest anticholinergic effects. Some of the evidence that led to those ratings is inconsistent with more recent studies. For example, Chew and colleagues tested a group of drugs and found that many of the drugs identified as anticholinergic by Larry Tune’s earlier work did not have anticholinergic properties for their assays. Tune’s work was the basis for many of the level 1 ratings. However, not all of those drugs have been reevaluated. The bottom line is that it is preferable to ignore level 1 drugs unless the preference is to calculate the whole score.

On the other hand, we have the example of the Anticholinergic Cognitive Burden Scale as a measure of drug-related anticholinergic burden: associations with serum anticholinergic activity. J Clin Pharmacol. 2006;46:1481-6.

Finally, we are pleased to inform you that our research group is currently working on a new update of the Anticholinergic Burden Calculator to include specific recommendations for clinicians to facilitate the optimization of pharmacotherapy. In addition, we plan to request express authorization from the authors of ACB to include the 2012 update and offer the information on anticholinergic load as completely and fully updated as possible.

Conflict of interests

No conflict of interest.

Bibliography