



LETTERS TO THE EDITOR

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Comments on the Anticholinergic Burden Calculator Web Tool. REPLY

Comentarios sobre la herramienta web *Anticholinergic Burden Calculator*. RÉPLICA

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Dear Domingo-Echaburu *et al.*:

First 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 studied¹.

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 Calculator² after the author had given his consent due to the significant changes it makes, such as the inclusion of biperiden, fesoterodin 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 co-

lleagues 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^{3,4}. 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 (ACB) scale, which was revised and updated in 2012 with important changes such as the inclusion of fesoterodin and solifenacin with a score of level 3. However, we were not able to include this in the Anticholinergic Burden Calculator for reasons of Copyright⁵.

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.



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