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Desarrollo de la herramienta web Anticholinergic Burden Calculator

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The anticholinergic burden is defined as the cumulative effect of concomitantly taking multiple drugs with anticholinergic properties. It estimates the risk of suffering anticholinergic adverse effects. Anticholinergic scales are lists that rank the anticholinergic potential of drugs into categories. A patient's burden may be calculated from the sum of the score of each drug included in the scale. This assessment provides clinicians the opportunity to reconsider the pharmacotherapy in order to optimize treatment¹.

Our research group has designed and developed a tool which calculates the anticholinergic burden based on 10 anticholinergic scales which have been firstly identified in a review² with the aim to be used in clinical setting. The tool was named Anticholinergic Burden Calculator (ABC). It is a web portal software program (www.anticholinergicscales.es/). (An app for smart phones is now in progress).

Anticholinergic risk scores are defined into three groups, low, medium and high, according to risk categorization made by the authors of each scale. The user can view a report that contains three tables and one graphic that describe the results (Fig. 1). Drug Burden Index scale is separately described because it is the only one based on a simple mathematical formula that takes into account the prescribed dose and the minimum effective dose³.

The Anticholinergic Burden Calculator (ABC) has been validated for accuracy. Medication data including drug name and dose were collected from 35 patients with multimorbidity included in the IMPACTO project involving a total of 310 drugs⁴. The anticholinergic burden was

calculated twice, manually and with Anticholinergic Burden Calculator (ABC). The results showed a 100% agreement.

The hand made anticholinergic burden calculation may be a tedious process. The tool facilitates the calculation of the total burden using 10 scales in a single step. Moreover, the professionals obtain very valuable information about treatment identifying which patients are at risk. On the other hand, they know drugs associated with increased risk and their contribution to the total load (the higher score, the greater risk). Thus, it facilitates decision-making on patient pharmacotherapy, reconsidering the treatment to reduce the load, for example, by deprescription, decreasing doses or substituting one drug for another without anticholinergic properties.

Our research group is currently working to improve the functionality of the web. Specific recommendations to help clinicians to make better decisions are in progress (Figura 1).

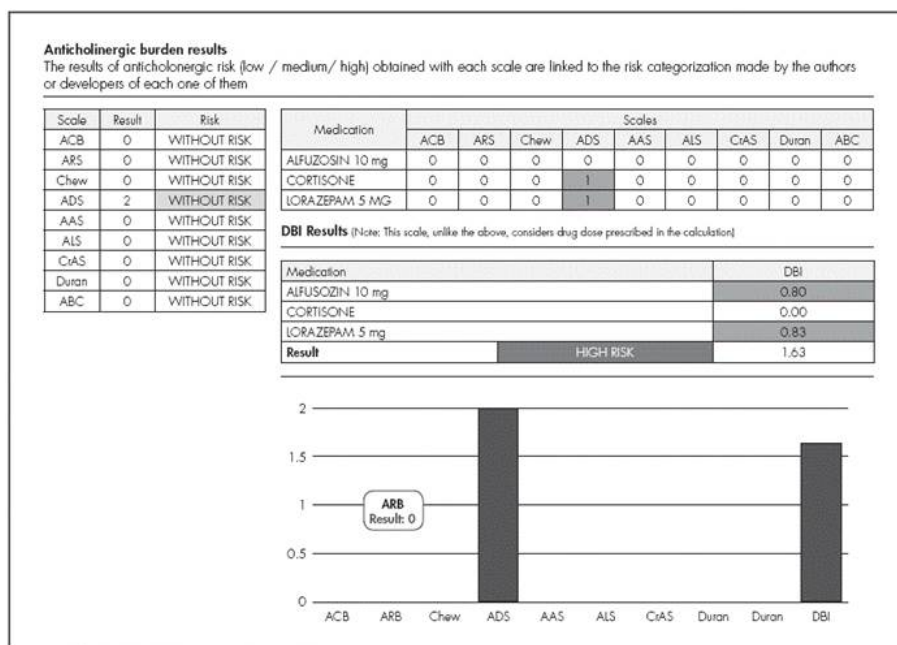


Figure 1
Tables and graphic according to risk score.

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Notas

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Declaración de intereses

The authors concerned declare that they do not have any of conflicts of interest.