Dose equivalents of antidepressants: Evidence-based recommendations from randomized controlled trials.

Dose equivalence of antidepressants is critically important for clinical practice and for research. There are several methods to define and calculate dose equivalence but for antidepressants, only daily defined dose and consensus methods have been applied to date. The purpose of the present study is to examine dose equivalence of antidepressants by a less arbitrary and more systematic method. We used data from all randomized, double-blind, flexible-dose trials comparing fluoxetine or paroxetine as standard drugs with any other active antidepressants as monotherapy in the acute phase treatment of unipolar depression. We calculated the ratio of the mean doses for each study and weighted it by the total sample size to find the weighted mean ratio for each drug, which was then used to define the drug’s dosage equivalent to fluoxetine 40mg/d. We included 83 studies (14131 participants). In the primary analysis, fluoxetine 40mg/day was equivalent to paroxetine dosage of 34.0mg/day, agomelatine 53.2mg/day, amitriptyline 122.3mg/day, bupropion 348.5mg/day, clomipramine 116.1mg/day, desipramine 196.3mg/day, dothiepin 154.8mg/day, doxepin 140.1mg/day, escitalopram 18.0mg/day, fluvoxamine 143.3mg/day, imipramine 137.2mg/day, lofepramine 250.2mg/day, maprotiline...
118.0mg/day, mianserin, 101.1mg/day, mirtazapine 50.9mg/day, moclobemide 575.2mg/day, nefazodone 535.2mg/day, nortriptyline 100.9mg/day, reboxetine 11.5mg/day, sertraline 98.5mg/day, trazodone 401.4mg/day, and venlafaxine 149.4mg/day. Sensitivity analyses corroborated the results except for doxepin. The number of studies for some drugs was small. The current method assumes dose response relationship of antidepressants. Our findings can be useful for clinicians when they switch antidepressants and for researchers when they compare various antidepressants in their research.