Reactivity to a 35% CO₂ Challenge in Healthy First-Degree Relatives of Patients with Panic Disorder

To the Editor:

The article by van Beek and Griez (2000) contains what appear to be some errors. On page 832, the first item in the first column in Table 4 says “VAS-A mean $25$,“ but presented are means ± SDs. I presume this is a typesetting error of some kind.

More concerning, however, are the results for the $\chi^2$ tests reported by the authors. In the section VAS-A Post Score, they report a $\chi^2$ value of 4.46 with a $p$ of .05. My calculation yields a $\chi^2$ value of 3.61 with a “trend” level of significance of $p < .06$.

The next section, CO₂-Induced Panic Attacks, states that panic attacks occurred in “twenty-one first-degree relatives (44%) and 12 control subjects (12%).” Clearly 12/50 is not 12%. Neither does 44% fit 21/50. It is obvious here that confusing mistakes were overlooked in the final check of our report. We apologize to our readers. The sentence quoted by Dr. Stein should be: “twenty-two first degree relatives (44%) and 12 control subjects (24%).”

Accordingly, a $\chi^2$ calculation for panic attacks relies on the same 2 × 2 contingency table as VAS-A Post Score. We maintain that this calculation yields a result of 4.46. Although he does not mention so, Dr. Stein apparently refers to a calculation that includes Yates’ correction for continuity. Application of Yates’ correction is recommended when the frequency of any cell in a 2 × 2 contingency table is less than 10 (Ferguson 1966, 207). Otherwise, Yates correction may provide overly conservative results (Conover 1974). In the present case the lowest expected frequency was 17. Consequently, there is little ground for using corrected statistics.

Finally, we would like to point out that the principal outcome measure of our study was CO₂-induced increase in anxiety. This increase was higher in the first-degree relatives of panic disorder patients than in the control subjects (Table 3). That is the finding upon which the “take home message” undoubtedly relies.

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References
