

Letter

Reply to Swartz

To the Editors:

We have read with interest the letter to the editor by C.M. Swartz (1988), particularly the section related to the analysis of the hormonal response to a pharmacological challenge. From a theoretical point of view, we fully agree with Swartz that the study of the area under the time-response curve of a hormone following a pharmacological stimulus actually represents the balance between a rate of stimulation and a rate of elimination (Swartz et al., 1986). In fact, in our study comparing the growth hormone (GH) response to clonidine and apomorphine challenges among matched groups of manic, major depressive, and minor depressive inpatients, we analyzed the GH data in several ways: by GH peak values following injection and by the areas under the curve situated between injection (time 0) and the last blood sampling (time 120 min) (Ansseau et al., 1987). Both analyses were performed using absolute GH values as well as differences related to basal levels (relative values). However, the individual correlations between all four methods, assessed by Pearson's correlation coefficient, were very high ($r > 0.98$), indicating that any of those methods could be used. It should also be remembered that Swartz et al., (1986) found a "near-perfect correlation" ($r = 0.97$) between the peak thyroid-stimulating hormone (TSH) elevation following thyrotropin-releasing hormone (TRH) and a kinetic model using individual values for total TSH release, TSH elimination and release rates. We have applied this model to a subsample of our patients and confirm the nearly complete correlation ($r = 0.98$). It should be noted that the kinetic study of hormonal response is a difficult and time-consuming method that does not provide any additional information as compared to the very simple use of the GH peak elevation.

Moreover, such an analysis would only be justified in the case of possible differences in the elimination rate of hormones among patients. Such differences in GH elimination have never been demonstrated or even suspected among different groups of psychiatric patients; in addition, all patients in our study were carefully screened for the possible existence of hepatic and renal disturbances by complete laboratory studies.

Therefore, the comment by Swartz, if true from a theoretical point of view, does not justify modifying the usual method of analyzing hormonal responses to pharmacological challenges.

References

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