Reviewer's report

Title: Single photon emission computed tomography (SPECT) of anxiety disorders before and after treatment with citalopram

Version: 1 **Date:** 9 June 2004

Reviewer: Lisa L Shin

Reviewer's report:

General

In the current study, the authors used SPECT to measure cerebral perfusion during rest before and after treatment with citalopram in patients with OCD, PTSD and social anxiety disorder (SAD). A comparison of post- vs. pre-treatment SPECT scans across all diagnostic groups revealed significantly decreased perfusion in the superior cingulate, right thalamus, anterior cingulate, and left hippocampus. Compared to treatment non-responders, treatment responders had a greater perfusion decreases in left precentral, right mid-frontal, left inferior frontal and left prefrontal cortices, and right precuneus. Responders and non-responders did not differ significantly with regard to pre-treatment perfusion patterns.

This is a novel, timely and interesting study with a relatively large sample size and well-characterized patient groups.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1) It appears as though the current PTSD sample is identical to that of Seedat et al. (2004). If this is the case, the authors might note this in the methods section.
2) In Tables 2 and 3, some of the MNI coordinates do not appear to correspond to the brain region listed. For example, in Table 3, the coordinates +8,-48,+16 were labeled as “left prefrontal” although the coordinates appear to map to right posterior cingulate cortex. Please clarify.
3) Although the treatment non-responders serve as a type of control group, the authors might note in the limitations section of the Discussion that this study does not include an untreated comparison group.

Discretionary Revisions (which the author can choose to ignore)

4) Treatment responders and non-responders did not significantly differ with regard to pre-treatment SPECT perfusion. However, might a whole-brain, voxelwise correlational analysis (across all subjects) reveal a significant relationship between pre-treatment SPECT perfusion and CGI improvement? A similar correlational analysis could be performed on pre-post SPECT change scores and CGI improvement scores.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

None