Amygdala, sACC Involved In Pathological Worry

BY ROXANNA GUILFORD-BLAKE

FROM THE ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR GERIATRIC PSYCHIATRY

SAVANNAH, GA. – Functional MRIs reveal neuroanatomical differences between normal worry and pathological worry in the elderly, and those differences might help explain why late-life anxiety often proves difficult to treat.

The amygdala and the subgenual anterior cingulate cortex (sACC) seem to be involved in the functional neuroanatomy of late-life anxiety disorders, Dr. Carmen Andreescu of the University of Pittsburgh reported at the meeting.

The findings, based on fMRIs of 10 nonanxious elderly people and 8 elderly people with anxiety, suggest a biological substrate for the persistent and uncontrollable characteristics of pathological worry, she said. The subjects were asked to worry while they were in the scanner, then they were asked to suppress the worry and think of "something nice" for a minute.

In the nonanxious subjects, worry induction increased activation of the amygdala and decreased activation of the sACC. During worry suppression, the scans revealed decreased activation of the amygdala and increased activation of the sACC.

Not so for the elderly subjects with generalized anxiety disorder (GAD). The fMRI revealed increased activation of the amygdala and the subgenual ACC during worry suppression, suggesting a delayed yet sustained amygdala involvement and the unsuccessful attempts of the subgenual ACC to modulate the worry process, she explained.

That the amygdala stays active during worry suppression is "the most yummy part," Dr. Andreescu reported, explaining it this way: Tell a friend without anxiety to stop worrying, and they will. Tell someone with pathological anxiety to stop worrying, and the result might be increased amygdala activity.

"There is a paucity of data regarding late-life anxiety, but based on my preliminary data, it seems that these regions are involved in late-life anxiety, just as they are in mid-life anxiety," she said in an interview. Significantly, when someone tries to modulate his or her worry, "the interplay between these two regions is different in healthy people and in pathologically anxious people."

Dr. Andreescu reported no conflicts relevant to the study. ■

Latest Findings on Fish Oil, Cognition Disappointing

BY JENNIE SMITH

FROM THE AMERICAN JOURNAL OF CLINICAL NUTRITION

Consumption of omega-3 polyunsaturated fatty acid supplements has no measurable effect on cognition in older adults, according to U.K. researchers who sought to detect whether daily use of the supplements could prevent cognitive decline.

For their 2-year, blinded study, funded by U.K. health and nutrition agencies, a team of investigators led by Alan Dangour, Ph.D., of the London School of Hygiene & Tropical Medicine, randomly assigned 867 older adults in good cognitive health and who did not take fish-oil supplements to a daily dose of 200 mg eicosapentaenoic acid (EPA) plus 500 mg docosahexaenoic acid (DHA), or an olive-oil placebo.

The mean age of participants was 75 years; 55% were men, according to the study (doi: 10.3945/ajcn.2009.29121).

Though concentrations of EPA and DHA were significantly higher in blood samples from the treatment group, no decline in cognitive function was detected in either group. "After 2 years we can say definitively that there's no benefit," Dr. Dangour said in an interview.

"We're disappointed, but we conducted the best possible study and certainly the largest to date."

Standardized tests of memory and cognitive function and serum EPA and DHA levels were administered at baseline and after 24 months.

In the treatment arm, 376 subjects completed the study, compared with 368 in the control arm. Analysis was by intention to treat

The findings appear in stark contrast to those of a 2006 study of 899 similar-age subjects from a large cohort (Arch. Neurol. 2006;63:1545-50). In that study, people in the top quartile of plasma DHA levels saw a 47% reduction in the risk of developing all-cause dementia after 9 years.

But cohort studies are difficult to compare with randomized, controlled trials, Dr. Dangour pointed out, and "there are loads of other studies that say there's a benefit for people who eat more fish."

The point of this study, specifically, was to detect a measurable benefit from a dietary change rather than the accumulated benefits of a lifelong habit.

Neither Dr. Dangour nor his coauthors declared any competing interests. Fish oil for the study was donated by Ocean Nutrition Canada Ltd. ■