Exercise Boosts Mental Health in Osteoporosis

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BOSTON — A program of regular, low-impact exercise can improve mood and executive functioning in older adults with osteoporosis, according to research in a poster presentation at the annual meeting of the Society of Behavioral Medicine.

Of 16 elderly residents with osteoporosis living independently in a multilevel health care facility, the 8 individuals randomized to an osteoporosis exercise intervention two to three times per week for 3 weeks experienced improvements in working memory and self-reported quality of life measures, compared with the 8 individuals assigned to the wait-list control condition, reported Dana B. Kazmerski and her colleagues.

The median age of participants in the study was 84. All of the participants underwent baseline and postintervention screening for cognitive function using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) measure, and for depression and mood swings using the Beck Depression Inventory (BDI), the Geriatric Depression Scale (GDS), and the Wisconsin Quality of Life Index (W-QLI). There were no significant differences between the groups in the preintervention measures.

Postintervention, the exercise group showed significant improvements on the RBANS coding subtest, which measures information-processing speed, and on the quality of life depression and mood swing measures. Repeated ANOVA measures showed no significant impact on the results of potential covariates.

The results of the study are consistent with those of investigations linking exercise to increased executive functioning and extend such findings to the current aging population with osteoporosis, noted Ms. Kazmerski who authored the study with Cay Anderson-Hanley, Ph.D., both at Union College in Schenectady, New York.

"The improvements [we] found in mood and executive functioning suggest that an osteoporosis exercise program may not only provide protection against brittle, thin bones, but perhaps can also help improve quality of life in terms of less depression and improved working memory," Ms. Kazmerski said.

Semantic Memory Lost Early in AD

In-office testing of semantic memory may be an easy and quite sensitive early diagnostic tool for Alzheimer’s disease, suggested Asmus Vogel, a Ph.D. student in the memory disorders research unit at Copenhagen University Hospital, and colleagues.

They concluded that semantic memory deficits occur even in predementia Alzheimer’s patients, perhaps due to the early development of neurofibrillary tangles in the temporal neocortex. Short neuropsychological tests with semantic content may be a valuable tool for assessing patients with suspected AD, the investigators said (Dement. Geriatr. Cogn. Disord. 2005;19:75-81).

In their prospective study, the researchers administered five neuropsychological tests focusing on semantic memory to a total of 182 elderly subjects, including 58 healthy controls, 22 patients with predementia AD, and 102 patients with mild AD. The average age was 74 years.

The majority of mild AD patients had mild or moderate semantic impairment, and 25% had severe impairment (deficits on four of the five tests). Among predementia patients, 59% had below normal scores on at least one test, although only 9% were impaired on three or more tests.

The high frequency of semantic dysfunction in the earliest stages of AD has important clinical implications, they said. “First, semantic memory tests may be sensitive diagnostic tests in the assessment of patients suspected to have dementia. … Further, tests for semantic memory have been found to correlate strongly with patients’ functional performance. This correlation highlights that assessment of semantic memory is important in early AD when trying to identify patients in need of professional assistance and care.”

—Michele G. Sullivan