Program Improves Hip Fracture Outcomes

Targeted intervention that includes progressive resistance training lowered mortality, dependency.

B Y D A M I A N M C N A M A R A
FROM THE ANNUAL MEETING OF THE GERONTOLOGICAL SOCIETY OF AMERICA
NEW ORLEANS – Compared with usual care after hip fracture, a comprehensive and targeted intervention that includes high-intensity progressive resistance training over 12 months lowers mortality, decreases nursing home admissions, improves activities of daily living dependency, and decreases the use of assistive devices, according to a randomized, controlled trial.

“It is possible to change the most important outcomes for these people,” Dr. Maria A. Pezzullo Singh said.

Functional dependency, however, did not significantly differ between groups. Many facets of hip fractures have been studied, from pharmacologic prevention of osteoporosis to acute hospital interventions to fracture rehabilitation. “Although we’ve done a lot of studies, we still have not figured out how to prevent people from entering a nursing home or dying,” said Dr. Singh, professor of medicine and chair of exercise and sport science at the University of Sydney.

So Dr. Singh and her colleagues launched the Hip Fracture Intervention Trial (HIPFIT). They compared outcomes for 62 hip fracture patients randomized to resistance training and up to 12 other interventions vs. 62 patients randomized to usual care. Intervention was associated with an 84% reduction in the likelihood of dying, according to a randomized, controlled trial.

In the current study, after the researchers controlled for age, there was less of a decline in function for total KATZ score, transfer change, and continence change if patients were in intervention group vs. usual care, according to Dr. Singh.

“Did changes in KATZ activities of daily living total score and scales mediate the nursing home admissions we saw? It seemed to be the case,” Dr. Singh said. “The nursing home residents had greater decline in KATZ function and toileting (continence) scores vs. others.” All results are based on an intent-to-treat analysis. The dropout rate was low; she said: nine HIPFIT patients and three usual-care patients did not complete follow-up.

At baseline, the community-dwelling patients were 69% female; mean age, 79 years; 83% at nutritional risk; 88% vitamin D insufficient; 90% living independently (vs. 16% in nursing homes); and 38% were cognitively impaired. A total 45% were depressed. The mean number of chronic diseases was 3.4. The usual-care group reported worse bodily pain, the only significant difference between the groups. There were no adverse events, except for some musculoskeletal soreness after activity.

Dr. Forsblad-d’Elia and Dr. Carlsten, both of the center for bone and arthritis research at the University of Gothenburg (Sweden), looked at 88 postmenopausal women with radiographic joint destruction due to rheumatoid arthritis. Findings from earlier research by Dr. Forsblad-d’Elia have shown that RA is strongly associated with generalized osteoporosis (Ann. Rheum. Dis. 2003;62:17-23).

Patients were randomized to one of two groups. The first received HT, which consisted of estradiol and norethisterone acetate, plus a daily dose of 500 mg calcium and 400 IU vitamin D. Controls received only the calcium and vitamin D.

Patients had digital x-ray radiogrammetry–bone mineral density (DXR-BMD) readings at baseline and at 2 years. A total of 50 women (23 HT patients, 27 controls) were ultimately included in the study analysis. The mean age of both groups was roughly 58 years, and both groups had a mean disease duration of greater than 10 years.

According to the researchers, at baseline, HT patients and controls had an identical mean DXR-BMD reading of 0.45 g/cm²; HT patients had a standard deviation of 0.096, vs. 0.081 in the control group.

Two years later, HT patients’ mean reading was identical except for a tiny increase in the standard deviation, to 0.097, whereas control patients’ mean DXR-BMD was 0.44, with a standard deviation of 0.084. The magnitude difference was insignificant for the HT group, but significant for controls, both in terms of change from baseline and differences from the HT group. Put another way, the decrease among HT patients from baseline was 0.36%, while the decrease from baseline for controls was 3.74% – more than 10 times greater.

“DXR-BMD has been proposed to be an outcome measure in monitoring treatments in early RA, and can predict future radiographic joint damage,” concluded the authors. Based on the current data, however, “we suggest that DXR-BMD could serve as an outcome measure in [randomized controlled trials] in long-standing RA,” they wrote.

Digital X-Ray Radiogrammetry Shows Minute Bone Loss in RA

B Y D E N I S E N A P L I
FROM THE ANNUALS OF RHEUMATIC DISEASES
Hormone therapy stabilized bone over a 2-year period in rheumatoid arthritis patients, as measured on digital x-ray radiogrammetry, a study has shown.

The study is important not only for finding that hormone therapy (HT) was effective, but because it depended on readings that detected losses of as little as 0.36%.


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