Video Analysis Prompts Shift In Thinking on Causes of Falls

BY JEFF EVANS
FROM THE INTERNATIONAL CONGRESS ON GAIT AND MENTAL FUNCTION

WASHINGTON – More often than not, elderly patients who fall in long-term care facilities do not trip or stumble while walking, but are instead transitioning from standing still or initiating a new activity at the time of their fall, according to an analysis of video-recorded falls. “These results challenge traditional assumptions regarding the cause and circumstance of falls in older adults living in long-term care,” Stephen N. Robinovitch, Ph.D., said at the meeting.

About half of older adults living in long-term care facilities fall each year, whereas the annual incidence is about 30% among older adults living in the community, said Dr. Robinovitch of the department of biomedical physiology and kinesiology at Simon Fraser University, Burnaby, B.C.

Studies of self-reported falls have suggested that about half of all falls result from slips and trips, while the rest are ascribed to losing balance, changing posture, or a leg giving way. In these studies, the most common activities at the time of a fall were walking, turning, transferring, and reaching.

As part of the ongoing Vancouver Fall Mechanisms Study, Dr. Robinovitch and his colleagues are working with two long-term care facilities in British Columbia to develop “real-life laboratories” where they can witness activity before and during falls instead of relying on self-reports.

In common areas throughout the two facilities (each with about 230 beds), the investigators used 270 digital video cameras to record 184 falls by 124 residents during a 2-year period. Three expert reviewers classified the key characteristics of each fall. “A lot of what our data are suggesting is that falls among this population are highly variable,” Dr. Robinovitch said in an interview.

Unlike previous studies of falls, the videos indicated an incorrect transfer of weight caused most falls (51%). Trips were estimated to account for 22% of falls, and slips for only 4%. Hitting or bumping something caused 21% of falls, collapsing was to blame in 10% of falls, and losing support from an external object was the cause in 13%. Each fall could have multiple causes.

At the time of a fall, four activities were significantly more common than others: walking forward (26%), standing quietly (22%), sitting down or lowering (16%), and initiating walking (16%). “In clinical evaluation, you have to consider ... all four of these activities as equally important,” Dr. Robinovitch said.

Dr. Robinovitch noted that many older adults, especially older women, are unable to react quickly enough to take a corrective step or can’t break a fall with their hands. In the video study, residents hit their heads in 30% of falls, their hip in 46%, and their hands in 54%.

Impact to the hands did not affect the probability of impact to the head. This suggests that even older adults appear to maintain the protective response of moving their hands to arrest a fall, strengthening exercises are warranted to improve the effect of this response, he said.

Nursing Home Residents Who Reject Care Require Screening

BY SHERRY BOSCHERT
FROM THE ANNUAL MEETING OF THE AMERICAN MEDICAL DIRECTORS ASSOCIATION

LONG BEACH, CALIF. – Rejection of care by nursing home residents was associated with four potentially modifiable factors in an analysis of data on 3,230 residents.

Clinicians should screen for the conditions – delusion, delirium, minor or major depression, and severe or worse pain – when residents reject care such as taking medications and accepting assistance with activities of daily living, Dr. Shinya Ishii and associates reported in the top prize–winning poster presentation at the meeting.

If the associations observed in the study are causal, appropriate interventions may improve residents’ willingness to accept care, the researchers suggested. The team analyzed data on residents scheduled for Minimum Data Set assessments in 71 nursing homes in eight states. Nurses identified residents who were rejecting care.

The likelihood of doing so increased fourfold in the presence of delusion and doubled in the presence of delirium, depression, or severe-to-horrible pain, reported Dr. Ishii of the Department of Veterans Affairs’ geriatric research, education and clinical center, Los Angeles.

Among the 312 residents who exhibited rejection-of-care behaviors, 18% had delusions, 35% had delirium, 32% had minor depression, 15% had major depression, and 30% had severe to “horrible” pain. Some symptoms overlapped. An attributable-risk analysis suggested that 19% of care-rejecting behavior could be eliminated if delusions were stopped and that 5% of care rejection might end if delirium was reversed.

“Treating minor depression might eliminate 7% of care-rejecting behavior, reversing major depression might eliminate 10% of care-rejecting behavior, and ending severe or worse pain might eliminate 5% of care-rejecting behavior, Dr. Ishii reported.

Several covariates also were associated with rejection of care, including being male and having moderate or severe cognitive impairment.

Factors that were not associated with rejection of care included hallucinations to moderate pain, hearing and vision impairment, and infections (including urinary tract infection, pneumonia, wound infection, HIV, tuberculosis, and viral hepatitis).

The large, geographically diverse sample of residents strengthened the findings of the study, but its cross-sectional design did not allow examination of temporal sequences.

Also, the lack of any significant association between care rejection and infection might be attributable to different time frames for reporting infection, compared with those governing the other variables.

The investigators reported having no disclosures.

Mental Illness May Compromise Cancer Care

BY DIANA MAHONEY
FROM THE AMERICAN PSYCHIATRIC ASSOCIATION’S INSTITUTE ON PSYCHIATRIC SERVICES

BOSTON – Older adults with mental illness are less likely to undergo chemotherapy after a cancer diagnosis than those without mental illness, a study has shown. The findings are consistent with those from previous studies suggesting disparities in the care of chronic conditions among mentally ill older adults, Dr. Simha E. Ravven reported at a meeting.

“Even though adults with mental illness are often well connected to primary care, our findings suggest that they may not be receiving the same kind of cancer treatment and that they may need more support and counseling to get the same care,” said Dr. Ravven, a fellow at Harvard Medical School, Boston.

To determine whether cancer screening and treatment vary for people with prior mental illness, and if mortality after a cancer diagnosis differs in this population, Dr. Ravven and her colleagues reviewed records for the 19,045 participants of the year 2000 wave of the National Institute on Aging’s nationally representative, longitudinal Health and Retirement Study (HRS). The study, conducted by the University of Michigan, Ann Arbor, surveyed adults born in 1947 or earlier to assess mental health, financial status, family support, and retirement planning among aging Americans, she said.

Major Finding: Older adults with mental illness are less likely to receive chemotherapy than are their peers without mental illness.

Data Source: Records from the 2000 wave of the National Institute on Aging’s Health and Retirement Study.

Disclosures: Dr. Ravven had no conflicts to disclose.

The likelihood of doing so increased significantly 2 years than were men without mental illness, while the opposite was true for women, Dr. Ravven noted. “Women with a history of mental illness who had a cancer diagnosis had a significantly lower risk of mortality within 2 years than [did] those without,” she said.

While the reasons for the disparities are unclear, it is possible that patients with mental illness avoid chemotherapy because they are psychologically prepared for the rigorous treatment or their physicians have concerns about treatment adherence, Dr. Ravven hypothesized.

The findings are limited by the study’s retrospective design and failure to look at stage of cancer diagnosis or cancer site, Dr. Ravven acknowledged.

It is possible that treatment disparities relate to the fact that chemotherapy might not have been part of the standard treatment protocol for certain stage cancers.

Dr. Ravven and her colleagues plan to further investigate the treatment disparities, she said, noting that future research will include more detailed information, including cancer stage and site, and the nature and severity of the mental illness.

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