Falls and Disability Among Female Cancer Survivors

“The bottom line for clinicians is that they need to more frequently monitor patients for signs and symptoms of neuropathy throughout treatment.”
—Kerri M. Winters-Stone, PhD, FACSM

New research sheds light on the functional impact of chemotherapy-induced peripheral neuropathy (CIPN) symptoms on cancer survivors. The article, authored by Kerri M. Winters-Stone, PhD, FACSM, and colleagues, reports that 47% of 512 women who were cancer survivors experienced CIPN symptoms 6 years after treatment (J Clin Oncol. 2017;35:2604-2612). The study also found that women with CIPN experienced worse function, greater disability, and more falls compared with those without CIPN. “This is an important contribution to the research, because it demonstrates that many women who are treated with chemotherapy will have long-term symptoms, impairments, and functional disabilities associated with CIPN,” explains Julie Silver, MD, director of cancer rehabilitation at Harvard Medical School in Boston, Massachusetts, who was not involved in the research.

Results
“Women with persistent CIPN symptoms performed worse on several objective tests of physical function and reported poorer functioning, more disability, and nearly twice the rate of falls compared with asymptomatic women. Outcomes worsened with increasing symptom severity,” wrote the authors in their discussion. Specifically, women with CIPN symptoms were 1.8 times more likely to experience a recent fall than asymptomatic women.

“I was somewhat surprised by the proportion of women who still reported neuropathy symptoms so far (time since diagnosis, 5.8 ± 4.1 years) after finishing treatment, though on the other hand we have been observing this in our exercise trials for a number of years already,” says Dr. Winters-Stone, a research professor in the School of Nursing at Oregon Health & Science University in Portland. “That was what drove us to look at these data in the first place. Women came into our exercise programs so deconditioned and with so many lingering problems from treatment that remained unaddressed for years.” This clinical observation was consistent with the researchers’ data, namely that as the symptoms of CIPN persisted, the women reported significantly worse physical function and more mobility disability compared with asymptomatic women. Likewise, Dr. Winters-Stone observed in her clinic that because of their neuropathy, pain, and weakness, over time the women lost the ability to perform even basic exercises correctly. These women were not doing well functionally and had difficulty just moving about.

“Gait instability may worsen early when symptoms progress from mild to moderate, whereas functional strength declines as symptoms become more severe,” explained the authors in their discussion.

Implications for Clinical Practice
The authors’ findings have led them to suggest that CIPN be assessed earlier in the clinical pathway. Dr. Silver agrees, explaining that CIPN subtle CIPN, and I know that minor symptoms can cause major problems, especially when it comes to falls in people who have some osteoporosis.”

When the investigators performed a gait analysis, they found that women with CIPN symptoms displayed an abnormal gait pattern, walked more slowly, took shorter steps, and spent more time in standing phases of gait to maintain stability while walking. “Gait instability may worsen early when symptoms progress from mild to moderate, whereas functional strength declines as symptoms become more severe,” explained the authors in their discussion.

KEY POINTS
- Approximately one-half of women have symptoms of CIPN 6 years after treatment.
- Women with persistent CIPN symptoms were found to have poorer physical functioning, more disability, and nearly twice the rate of falls as asymptomatic women.
- Women with neuropathy, pain, and weakness frequently lose their ability to perform even basic exercises correctly.
can become worse over time, especially as patients continue to receive chemotherapy, and that it is helpful for the patient and the care team to understand that CIPN may not resolve after treatment. “Screening patients early in their treatment and then rescreening them is important,” she added. The authors also recommend that patients be informed that chemotherapy is associated with a risk of CIPN, and that strategies be put in place in both clinical and survivorship care plans to limit symptom progression and improve function. “I think patients have a right to know, but this needs to be done in a way that a solution can be offered simultaneously,” wrote Dr. Winters-Stone in an e-mail to CA Perspectives. “Our study is limited because it is cross-sectional, self-reported,” said Dr. Winters-Stone, but she still suggests that, “simply asking patients about their neuropathy symptoms and considering early intervention seems to only offer advantages in terms of preserving patient QOL [quality of life] during and after treatment.”

When patients do present with CIPN, Dr. Silver says her first response is to examine her patients’ shoes to evaluate whether they need a wider size or would benefit from some other adjustment to their footwear. Next, she questions patients about their home because many patients can benefit from modifications. For example, she encourages the use of antifatigue mats in the kitchen, although she is careful to caution the patient to remove the mat if it poses a tripping hazard. The shower can also present a fall risk, and Dr. Silver discusses whether it is possible for the patient to add a seat to make showers safer, as well as more pleasant. She also recommends that her patients install grab bars near the toilet to increase safety.

Dr. Silver may also refer the patient with CIPN for physical rehabilitation and exercise, as “…early physical therapy that focuses on balance and gait may prevent some problems that occur later, including falls and bone fractures,” she says. In addition, exercise can help to relieve symptoms of CIPN when prescribed properly, and especially when supervised by a trained exercise specialist who received education and has experience working in the oncology setting.

Above all, Dr. Silver counsels oncologists to have the conversation about CIPN with their patients sooner as opposed to later. The conversation should include a discussion of the symptoms of CIPN as well as the establishment of a plan to monitor the patient for CIPN throughout chemotherapy. She suggests asking patients how often they trip or stumble without actually falling because this may be an early indicator of CIPN. Although a patient is likely to note a fall and report it to a physician, repeated trips might be an overlooked and important precursor to falling. Dr. Winters-Stone agrees. “The bottom line for clinicians is that they need to more frequently monitor patients for signs and symptoms of neuropathy throughout treatment and trigger a referral to physical therapy when a patient’s symptoms begin to affect their functioning, or potentially even before the patient feels there is a problem with functioning (ie, prevention),” she says.

doi: 10.3322/caac.21380