Cancer Care in Crisis

BY PEGGY EASTMAN

An aging population and rising cancer incidence, along with increasing scientific complexity and rapidly escalating costs, are placing the U.S. cancer care system in crisis mode. That is the conclusion of a new report from the Institute of Medicine, which aims to chart a new course through the current system described as too often fragmented, unresponsive to patient preferences, and not making sufficient use of palliative and hospice services.

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‘Prehabilitation’ Gaining Acceptance as Part of Continuum of Cancer Care

BY ROBERT H. CARLSON

A growing body of literature is showing that prehabilitation—i.e., physical and psychological preparation before surgery for cancer—can prevent or reduce the severity of impairment due to that surgery. Attention before surgery impairments could reduce the need for postsurgical rehabilitation, and proponents of prehabilitation say they hope that further research will someday show that it improves outcomes as well.

While prehabilitation studies to date are small, and many are in the realm of proof of concept, physiatrists involved in prehabilitation believe it fills a need that has not been recognized.

The first review of the evidence to date has now been published (Am J Phys Med Rehab 2013;92:715-727). Prehabilitation for that analysis was defined as a customized exercise program designed to prepare the body and mind for an upcoming surgical procedure. Julie K. Silver, MD, Associate Professor of Medicine in the Department of Physical Medicine and Rehabilitation at Harvard Medical School, co-author of the article with Jennifer Baima, MD, also a physiatrist at Harvard, explained in a telephone interview that most available data on prehabilitation are from studies of orthopedic and pulmonary surgical patients.

The article notes that the process begins with physical and psychological assessments to establish baseline functional levels, identify impairments, and provide targeted interventions.

Silver described as an example what might be done for a newly diagnosed breast cancer patient: “Because many women have upper body pain and limited shoulder and neck range of motion after treatment for breast cancer, it would be important to assess those in the patient before treatment and perhaps prescribe specific exercises that would facilitate a normal range of motion after treatment.”

It would also be ideal to give newly diagnosed women evidence-based psycho-logical interventions that are known to decrease stress and anxiety, she said.

Asked for his perspective for his article, Brian Tiep, MD, Director of the Pulmonary Rehabilitation and Smoking Cessation Programs at City of Hope, said that in some cases prehabilitation might allow a patient to undergo a procedure that otherwise would not be done: “For example, a person with COPD may need surgery for lung cancer, but surgeons might decide not to operate because they are afraid the patient is in danger of developing postoperative complications.”

Prehabilitation, though, could possibly change that patient’s status to allow the surgery. “There’s no magic to prehabilitation,” Tiep continued. “It’s a set of tools that enables patients to tolerate treatment better and live with a better quality of life in spite of the fact they have this disease and that the therapies are all difficult to tolerate.”

Who Pays?

Reimbursement for prehabilitation services could potentially be a stumbling block with payers. But Silver notes that smoking cessation is a valuable intervention known to improve outcomes when implemented before surgery, and those programs are covered by most insurers. Mental health screenings can be covered by insurance as well, and physical training is sometimes covered as pulmonary prehabilitation for patients about to undergo lung surgery—“Don’t assume prehabilitation won’t be covered by insurance.” she said.

Robert S. Mayer, MD, Associate Professor of Physical Medicine and Rehabilitation at Johns Hopkins Hospital, noted, though, that while reimbursement for prehabilitation might not be denied outright, in some cases it could be curtailed when insurers set limits on the number of patient visits and that number includes pre- and post treatment rehabilitation.

Reducing the Stress of Surgery

One of the researchers in the field, Franco Carli, MD, Professor in the Department of Anesthesiology at McGill University, said he first approached the concept of prehabilitation as a way to help cancer patients withstand the stress of surgery. His research projects at McGill currently focus on preparing cancer patients for colorectal surgery or radical cystectomy.

“Besides aerobic and strength conditioning, a multimodality approach pre-surgery must also pay attention to nutrition and stress reduction,” he noted.

Prehabilitation protocols ideally start four to six weeks before surgery, he said. “In our research we are looking at function—are patients able to return to function after abdominal surgery earlier than the eight to 10 weeks we usually see?”

Carli says his studies at the moment are aimed at proof of concept: “Prehabilitation is intuitive—if you are going to run a marathon, which is stressful, you prepare with diet and exercise. Surgical stress is like a marathon, but today for these patients there is no preparation whatsoever.”

Attention before surgery impairments could reduce the need for postsurgical rehabilitation, and proponents of prehabilitation say they hope that further research will someday show that it improves outcomes as well.

Using Time after Diagnosis to Prepare for Surgery

He explained that although newly diagnosed cancer patients typically want to know how they can be immediately involved in their care, they often don’t know what to do between diagnosis and surgery: “Nobody is telling them what to do at home; there are no guidelines, and

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Head and Neck Cancer: Study Finds Benefits for Swallowing-Preservation Exercises

BY HEATHER LINDSEY

Head and neck cancer patients receiving radiation are less likely to experience worsening of diet, need a gastronomy tube, or have stenosis if they follow specific “swallow-preservation” exercises throughout therapy, according to a study now available online ahead of print in the journal Otalaryngology—Head and Neck Surgery (doi: 10.1177/0194599813502310).

“The protocol ‘is an essential component of a comprehensive multidisciplinary treatment program for head and neck cancer patients,’ the senior author, Marilene Wang, MD, Professor-in-Residence in the Department of Head and Neck Surgery at UCLA’s David Geffen School of Medicine and member of the Jonsson Comprehensive Cancer Center Signal Transduction and Therapeutics Program Area, said via email.

Patients need to be aware of the potential adverse effects of chemotherapy and radiation on swallowing and be encouraged to regularly exercise the appropriate muscles to avoid losing their swallowing ability. “Even though it may be difficult, tedious, and painful, every effort should be made to keep these muscles active,” she said. “Just like with other muscles in the body, lack of use will lead to weakness and eventually total loss of function.”

The Wang et al study is one of the better studies performed to date showing the promise of such a protocol during treatment of head and neck cancer, commented M. Boyd Gillespie MD, Msc, Professor of Otolaryngology-Head and Neck Surgery at Medical University of South Carolina. Many prior studies assessed only the use of speech therapists after treatment, he noted.

Exercises included gargling liquid for 10 seconds (repeated 20 times), tongue protrusion (10 times), and tongue press (10 times), among several others—nearly all of which were performed three times a day.

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Prehabilitation can sometimes make it possible for a patient to undergo a procedure that otherwise would not be done.

that’s why we are looking for more specific interventions for them that accelerate recovery,” he said.

Tiep also said prehabilitation is welcomed by patients who want to do something about their cancer while they wait for treatment. “Prehabilitation programs are an opportunity for patients to feel more in control of their lives, to feel they can do something about their cancer.”

His own involvement in prehabilitation is via pulmonary rehabilitation, where surgical outcomes have been shown to improve with presurgical preparation. “We can’t say that prehabilitation improves outcomes directly, but we can say that putting a patient on an exercise program and using all the tools of pulmonary rehabilitation improves their chances of tolerating the treatment,” he said.

Silver points to another potential benefit of prehabilitation, a reduction in what she calls “outmigration”—when patients seeking a second opinion decide to be treated by the second physician.

But if the first physician enters the patient in a prehabilitation program, the patient has an extra connection with that physician even if the patient does see other physicians for another opinion.

Prehabilitation programs are an opportunity for patients to feel more in control of their lives, to feel they can do something about their cancer.”

Still, making prehabilitation a routine part of a cancer patient’s treatment plan isn’t going to happen overnight, Mayer said. “In general, there isn’t as much knowledge and appreciation about rehabilitation services even after treatment, much less in the initiation period.”

MARILENE WANG, MD: “Even though it may be difficult, tedious, and painful, every effort should be made to keep these muscles active. Just like with other muscles in the body, lack of use will lead to weakness and eventually total loss of function.”

Oncologists are curing an increasing number of cases of head and neck cancer with aggressive multimodality therapy, and survival is often associated with a cost to quality of life and swallowing function, he continued. Consequently, physicians need to integrate such swallowing exercises into their treatment plans.

Study Details

Wang and her colleagues at UCLA—first author is Victor M. Duarte, MD—conducted a retrospective database analysis of head and neck cancer patients who received radiation or chemoradiotherapy, and who used the swallow preservation protocol (SPP) before, during, and after treatment between 2007 and 2012. Patients had a mean age of 60, and 74 percent were male.

As part of the SPP, a speech-language pathologist evaluated all patients referred for radiation therapy two weeks before treatment. Patients also received education about their cancer and treatment side effects and underwent a pretreatment assessment for dysphagia. Swallowing exercises were introduced to maintain range of motion of the mouth and neck muscles and to counter radiation fibrosis. Exercises included gargling liquid for 10 seconds (repeated 20 times), tongue protrusion (10 times), and tongue press (10 times), among several others—nearly all of which were performed three times a day.

Compliance was based on the patient’s self-report at weekly visits to UCLA and defined as the performance of at least one full set of exercises per day. Noncompliance was considered to be less than that. Both compliant and non-compliant groups had similar baseline characteristics, including gender, age, weight, tumor type, treatment type, and pretreatment diet.

At one month 57 patients were categorized as SPP compliant and 28 as noncompliant. A significantly higher percentage of patients tolerated a regular chewable diet in the compliant group than in the non-compliant group (54% vs. 21%).

Compliant patients also had a significantly lower G-tube dependence (about 23% vs. 54%) and a higher rate of maintaining or improving their diet (54% vs. 25%) compared with noncompliant patients.