When cancer spreads to the spine, an operation developed in recent years can cut both hospital and recovery time

The specialist: Dr. Arthur Jenkins on spinal tumors

Jenkins, co-director of the Neurosurgery Spine Program at Mount Sinai, sums up his job in three words: “fix spines.” He performs spinal reconstructions, decompressions, stabilizations, and deformity correction for the whole spectrum of spinal disorders.

Who’s at risk

Spinal metastases are cancers that originate elsewhere and spread to the spine. “Everyone who has cancer is at risk,” says Jenkins. “Ten percent of patients with cancer eventually get spine tumors.” With 1.5 million Americans diagnosed with cancer each year, that means 150,000 of them may also develop a spinal tumor. Lung, breast, and prostate cancers are all tumors that are common, and therefore are common causes of spread to the spine,” says Jenkins. “Any cancer can spread to other parts of the body.” Tumors that originate in the spine have a different prognosis, and doctors often try to remove the whole cancer in hopes of a cure. “Whereas metastatic cancers tend to be incurable but significantly manageable,” says Jenkins. “The question is, How can we manage [patients’] disease to give them the longest quality of life?”

As for risk factors: “Things that predispose you to having a cancer in the first place – like smoking, hepatitis, exposure to carcinogens, infection and environmental factors – also predispose you to having a metastatic tumor,” says Jenkins. Age can also be a factor, because the longer you live, the more likely you are to have some kind of cancer.

Signs and symptoms

The major warning signs of spinal metastases are pain, weakness, and instability. “Any new neurological symptoms or new pain, especially in a cancer survivor, should be evaluated by a clinician to make sure it’s not a spread to the spine,” says Jenkins. Commonly, pain will occur when walking or bearing weight. Other symptoms include difficulty concentrating, how well you go to the bathroom, and pain that goes down the legs, back, or arms.

Although spinal metastases go undiagnosed in some people, most doctors are vigilant about watching cancer survivors for new symptoms. “If patients follow up with their clinicians and their clinicians do a thorough examination, usually they get taken care of pretty quickly,” says Jenkins.

What you can do

Learn about clinical trials

If you’re interested in participating in a clinical trial, the National Institutes of Health compiles data on almost 50,000 trials at www.clinicaltrials.gov. Many research hospitals, including Mount Sinai, have a contact number for clinical trials.

Know all your options

If you have cancer in the spine and significant weakness, don’t think there’s nothing to be done. There are treatment options beyond radiation alone.

Take weakness seriously

“Any patient who has weakness of any kind should be evaluated by a rehab specialist or get some kind of physical therapy to manage that weakness,” says Dr. Jenkins. “Spinal cord injury rehab centers can help people learn to manage their weakness.”

Traditional treatment

Cancers that have spread to the spine are usually past the point of cure. However, that does not mean treatment is unnecessary. “The big problem is that spinal metastases will grow without any resistance and erode the spinal bones or compress the surrounding structures,” says Jenkins. “That can cause pain, weakness, and paraplegia.”

For many patients, a combination of minimally invasive surgery and radiation can keep cancer under control and help them maintain quality of life and avoid paralysis.

Ten years ago, the standard operation for treating spinal metastases was major open surgery that required a 6- to 12-inch incision, a two- to four-week hospital stay and three to six months of recovery. “In the process of taking the cancer out through open surgery, you have to put in lots of rods, screws and hooks to replace the stability, part of which was eroded by the tumor and part of which was taken away by the surgeon to get to the tumor,” says Jenkins. Many patients were not willing to undergo such a surgery when they had a limited life span.

Seven years ago, Jenkins became the first surgeon to apply a new minimally invasive technique to spinal metastases. “The minimally invasive surgery only takes a 6.5- to 1-inch incision,” he says. “We remove the part of the cancer that is on the spinal cord to decompress, and stabilize by injecting cement to carry the load of the spine.” In some cases, doctors follow the surgery with radiation.

After minimally invasive surgery, patients usually stay in the hospital for just one to four days, and most of them are up and out of bed by the next day. “Seventy percent of the patients we operated on regained the ability to walk,” says Jenkins. “Plus, the much smaller incision can heal much more easily, so our complication rate is almost zero percent.”

BY THE NUMBERS

10% of patients with cancer eventually develop spinal tumors.

1.5 million Americans are diagnosed with cancer each year. If 10% of them develop spinal cancer, that’s 150,000 cases.

40.6% of people born today will develop cancer some time.

Source: Dr. Arthur Jenkins

Dr. Arthur Jenkins was the first surgeon to use minimally invasive techniques to treat metastatic spinal tumors.

Using minimally invasive surgery to treat spinal metastases is still so new that doctors haven’t reached a consensus on its efficacy. One study a few years ago found that patients who have the traditional open surgery along with radiation walk longer but don’t live longer than patients who only have radiation. Jenkins believes future studies will show that minimally invasive surgery can benefit both quality of life and life span. “We keep them out of the wheelchair, they do better, and they may very well live longer,” he says. “The jury is still out on that.”

Research breakthroughs

The options for patients with spinal metastases have increased dramatically in the last decade, and researchers are seeking ways to build on the cutting-edge therapies currently available. “We’re looking to put chemotherapy into the cement we use to hold up the spine, either in conjunction or separately from the radioactive seeds,” says Jenkins. “That way, when we take the tumor out of the bone, we can use the cement as a delivery system for other additional treatments.” This therapy is about to be tested for the first time in clinical trials.

Questions for your doctor

For patients with spine cancer, question No. 1 is, “What’s the full spectrum of treatment options?” Many patients end up consulting the first orthopedic surgeon they find, so it’s a good idea to ask, “Would it be appropriate for me to see a specialist in either minimally invasive surgery or spine cancer in general?” Despite the radical improvements in spine cancer surgery, not all doctors are familiar with the new treatments. “There are many patients out there who aren’t getting the full treatment they could have to maintain their neurological function as long as they can,” says Jenkins.

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