Spinewand

When a Spineward Procedure is Needed

Vertebral Compression Fractures

Vertebral compression fractures may occur in cancer patients due to the metastasizing of tumors to the spine, which results in weakening spots within the vertebra. Vertebra (vertebral body) are the single bones that join together to make up the spinal column. Compression fractures take place when the vertebra weakens and then collapses. Compression fractures, as those due to osteoporosis, can be debilitating, create a poor quality of life and cause immobility.

Metastatic Bone Disease

There are two types of metastatic bone lesions, osteoblastic and osteolytic lesions. Osteoblastic lesions increase bone density. These lesions do not change the strength of the bone, but can decrease the stiffness of the bone. Osteoblastic lesions are common in prostate cancer patients.

Osteolytic metastases decrease bone density. The less bone density present in a particular area, the more fragile the bone becomes. These lesions can decrease the strength as well as the stiffness of the bone. Osteolytic lesions are common in patients with metastatic cancer and multiple myeloma. In fact, approximately 70% of multiple myeloma patients present with osteolytic involvement of the spine. Osteolytic lesions are at a much higher risk for fracture due to the decreased density.

There are approximately 700,000 patients who suffer from vertebral compression fractures each year in the US. Of these compression fractures approximately 125,000 involve tumors. Currently only 16,500 patients with these ailments are actually treated. Once compression fractures occur, the quality of life may be terribly diminished for the patient. In the past, there were few good treatment options other than surgery. Open spinal surgery may restore the function of the spine; however can also involve surgical risks, long recovery, and some patients are not good candidates. Recently, a new minimally invasive (non-surgical) treatment has become available to treat these lesions and stabilize the vertebral column.

Spinewand

Coablation using the **Spinewand** targets the lesion, or tumor, directly to eliminate it from the vertebra. The Spinewand creates a very low temperature (40-70 degrees C) plasma field to vaporize the tumor, creating a cavity within the vertebral body. The energy from the plasma breaks molecular bonds of the tissue causing molecular dissociation. The result is tissue removal with minimal collateral tissue damage. This is a very precise tool that only creates a 2-3mm cavity surrounding the wand tip.

The Spinewand procedure is performed with either vertebroplasty or kyphoplasty. Once the cavity has been created, the interventional radiologist fills in the cavity with bone cement to stabilize the vertebra. This creates an internal cast for previously unstable vertebra. For further questions on vertebroplasty or kyphoplasty please view the above links.

The Spinewand is a minimally invasive procedure that requires either general or local anesthesia. Although usually an outpatient procedure, the patient may require an overnight stay, depending on overall health.

What to Expect

Prior to the procedure, a full work up will be performed to determine if this procedure is appropriate for you.

A majority of patients undergoing this procedure are given local anesthesia and a light sedation. You will be placed on your stomach and a small incision will be made near the location of your tumor. The interventional radiologist will then advance a needle to the location of the tumor using "real time" image guidance, fluoroscopy. Once the Spinewand has been performed and the bone cement is in place, you will be moved to a recovery area.

Some patients will be on an outpatient basis and be free to return home the same day. Your doctor will make this decision prior to the day of the procedure. Most patients are able to return to normal activities within 24-48 hours following the procedure.

Indications of the Cavity Spinewand:

- Painful Metastatic Lesions
- Unstable Metastatic Lesions
- Metastatic lesions with cortical disruption, especially posterior
- Metastatic lesions with epidural extension

Learn More

Vertebroplasty.com ? www.vertebroplasty.com
International Myeloma Foundation ? www.myeloma.org

Information provided by Arthrocare, www.arthrocare.com.