

Specialized Spinal Surgery

Helps local woman overcome rare, complicated condition

By Andrew Shanley



In nearly every case, hemangiomas are considered benign bone lesions. In fact, most remain undiscovered because they are asymptomatic. But that was not the case with patient Madeline Hernandez of Springfield.

"I was always very confident," says Madeline Hernandez, of her surgery performed by Dr. Marc Linson.

Mrs. Hernandez's thoracic spine hemangiomas broke free from the bone and expanded into her spinal canal, putting pressure on her spinal cord. By the time she saw Marc Linson, MD, an orthopedic surgeon on staff at Baystate Medical Center, she was living with intense pain and could barely walk or sleep.

"This was a very unusual situation, with the hemangiomas compressing the spinal cord like that," says Dr. Linson. "You just don't expect to see this happen. It was the first time I'd ever seen this."

After conducting some research, Dr. Linson found that very few surgeons in the region had ever seen a case like Mrs. Hernandez's. Only a few dozen cases like hers had ever been reported.

After more research and discussion with colleagues, Dr. Linson developed a plan of treatment. Before performing the delicate procedure to remove the hemangiomas, he first prescribed an embolization procedure to control the bleeding he knew could result from surgery with a vascular tumor.

At the time, the embolization procedure wasn't available at Baystate, so Mrs. Hernandez had to travel out of state. "Fortunately," says Sherry Taylor, MD, chief of Neurosurgery at Baystate, "we now have an outstanding neurosurgeon, Dr. Clemens Schirmer, who can perform this procedure at Baystate Medical Center."

The Risks

"The greatest challenge, as far as I was concerned," says Dr. Linson, "was that I didn't know what I would be dealing with once the surgery began. Usually, when I'm asked how often I do a certain surgical procedure, I can say that I've done it hundreds or thousands of times. But certainly not in this case."

He knew that once the surgery was underway, there was a tangible risk that Mrs. Hernandez could end up

paralyzed. "I knew I couldn't exert any pressure on the spinal cord, which has almost no tolerance for pressure before paralysis can occur," says Dr. Linson.

However, since Mrs. Hernandez's MRI showed that her spinal cord was already compromised by 50 percent,

"Only a top-tier hospital would be prepared to do all that was required in a case like this."

the pressure being exerted on her spinal cord by the hemangiomas had already become dangerous and put her at risk.

Dennis Oh, MD, director of Neurosurgical Oncology at Baystate, provided a second opinion to Mrs. Hernandez on this case. He agreed with the approach Dr. Linson was taking, and also agreed that there was a definite urgency to the case.

The Procedure

The surgery took 90 minutes. The pre-operative embolization effectively reduced the bleeding, which encouraged Dr. Linson. Unfortunately, Mrs. Hernandez's bones had been weakened by the hemangiomas, so it was necessary for Dr. Linson to implant several hooks and rods to stabilize the area.

By the end of the surgery, Dr. Linson was able to successfully remove all the hemangiomas without any major complications. "I was always very confident," says Mrs. Hernandez. She says she knew soon after surgery that the procedure was successful because so much of her pain was gone.



Mrs. Hernandez's radiation team included (left to right) radiation oncologist Seth Kaufman, MD, radiation therapist Ed Ouellette, assistant physicist Sue Costa, and senior radiation therapist Kathleen Arroyo.

Radiation Therapy

As a precaution, about a month after surgery, Dr. Linson prescribed radiation therapy for Mrs. Hernandez. While it's rare that radiation is used to treat anything but cancer, it was necessary in this case

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to completely neutralize the area where the tumors had grown and help ensure they didn't return.

Baystate radiation oncologist Seth Kaufman, MD, supervised the radiation therapy, which included four weeks of daily treatments. He says the radiation team included

a medical physicist, medical dosimetrist, radiation nurse, and radiation therapist. Because this was an unusual case, he also consulted outside experts to discuss the dosages of radiation that might prove most effective.

Mrs. Hernandez and her husband Israel are extremely grateful to Dr. Linson. "He has the experience, and he has the caring," says Mr. Hernandez.

"Mrs. Hernandez's case required great coordination between different teams of specialists, from surgeons, nurses, and anesthesiologists, to radiation oncologists, radiation therapists, and more," says Dr. Linson. "This reflects the depth of the resources we have here at Baystate Medical Center. Only a top-tier hospital would be prepared to do all that was required in a case like this."

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