

cancer NEWSLINE

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>> Welcome to Cancer Newsline, your source for news on cancer research, diagnosis, treatment, and prevention. I'm your host, Dr. Oliver Bogler. Our guest is Dr. Franco DeMonte, Professor in the Department of Neurosurgery, and we're talking about meningioma. Dr. DeMonte, can you tell us a little bit about what meningiomas are?

>> Sure. Meningiomas are the most common intracranial tumor. They are benign tumors, but, as you can imagine, a growing benign tumor in a closed space inside the head or inside the spinal canal can cause some really significant trouble. And despite the MD Anderson Cancer Center name, we do look after these patients with benign tumors.

>> Where does it come from?

>> The brain itself is lined by a leathery membrane called the dura. And this forms part of what's called the meninges and these tumors arise from this membrane that surrounds the brain and then, secondarily, grows in and compresses the brain's surface.

>> So how are they typically found?

>> Well, a lot of them are found incidentally. So people get MRIs for all sorts of reasons. And there's a good statistic that per every 100,000 MRIs done, there's between 300 to 900 meningiomas detected. So if you take a city like Houston with a metro population of 6.5 million, you could expect about 45,000 new diagnoses of meningioma per year.

>> Wow. That's a huge number. But sometimes they also I guess cause symptoms, right?

>> Yes. So when they do cause symptoms, they tend to be either large, usually larger than an inch in diameter, or in areas closely associated with functioning nerves or neural tissue causing loss of vision, decreased hearing, difficulty swallowing, losses in sense of smell, or problems with mobility.

>> So when you have those kinds of symptoms, what should you do?

>> Well, I think if you have any of those symptoms, any of those neurologic symptoms, you really need to see your physician. If an intracranial or an intraspinal problem is expected, then usually the imaging of choice is an MRI. And it's really important for meningioma that the MRI be done with contrast because these tumors are very well seen when contrast is given, but can actually be obscured without the contrast.

>> So let's say you have a diagnosis, how is the disease managed?

>> It's interesting when we look at studies that track what happens once a diagnosis of meningioma is made, about 50% to 60% of those tumors will not grow in the subsequent three to six years after the

diagnosis. There are some things that predict growth. Tumors greater than 2.5 to 3 centimeters tend to grow. Tumors that have certain features on MRI tend to grow. But a lot of them, a majority, almost 2/3, don't grow in the short-term. So one of the best and one of the often recommended forms of management is careful observation by someone who is experienced the management of meningioma.

>> And if things don't go well, if the tumor does start to grow or start to cause symptoms, what would you do then?

>> Well, the primary treatment for a benign tumor like meningioma is surgical removal. There are some extenuating circumstances that may suggest other forms of treatment such as radiation therapy, which is also very effective. But certainly if a benign tumor can be removed completely, then that is the management of choice.

>> And if it's removed completely, does it come back sometimes?

>> So the majority of meningiomas, about 85% to 90%, are what are known as grade 1 or benign meningiomas. And if they're completely removed, their reoccurrence rate over your lifetime is usually under 9%, sometimes less. But some of these tumors, about 5% to 15%, have more aggressive growth patterns and very few, 2% or so, can actually be malignant. So those tumors require more than just surgery, usually surgery in combination with radiation therapy to prevent any kind of reoccurrence.

>> So radiation therapy, but no chemotherapy for the aggressive meningiomas?

>> There is no proven chemotherapy for malignant or aggressive meningioma. There's a lot of ongoing trials right now looking at that. A lot of them are based on the genetic signatures of the tumors. So one of the big things we do is make sure that the tumor that we remove is sent to the appropriate studies to identify these genetic markers that may predict a good outcome with chemotherapy.

>> How does the brain recover after this large mass is removed?

>> Well, because these tumors grow very, very slowly, they can actually get to very large size before becoming symptomatic, but the brain just re-expands very, very commonly. It's distorted by the tumor. The optic nerves can be distorted by the tumor. The nerves can be stretched. But once the tumor is removed, those structures slowly return to their normal anatomic position and they recover -- people recover very well both from a symptomatic point of view and from the MRI imaging view.

>> Thank you very much, Dr. DeMonte, for sharing your knowledge with us today.

>> Oh, it's my pleasure. Thank you.

>> For more information, visit MDAnderson.org. Thank you for listening to Cancer Newsline. Tune in for the next episode in our series.

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