

Meningioma

Information sheet 04

Introduction

Find out more about this benign tumour which causes headaches & can affect nerve function.

Our information on meningiomas will help you talk with your doctor or medical team about your condition. It should not be used as a substitute for professional care.

What is a meningioma?

A meningioma is a tumour of the meninges. This type of tumour grows in the tissues which cover and protect the brain and spinal cord.

This type of tumour is most often found in the forebrain or hindbrain. They are usually benign (not cancerous).

Some meningiomas are atypical, which means they are more aggressive and can grow into surrounding tissue and may come back after they have been removed.

Malignant (cancerous) meningiomas are extremely rare. It is also possible, but rare to have more than one meningioma.

How often do meningiomas occur?

This is a rare condition. Around one in four brain tumours in adults (25%) is a meningioma. They are more common in older people and in women.

Meningiomas do not spread. Ninety percent of meningiomas are benign (non-cancerous), 67% are atypical, and two percent are malignant. Other two percent??

Atypical and malignant meningiomas are more likely to grow back.

What causes meningioma?

Like most brain tumours the cause of meningioma is unknown.

In some people there may be an underlying genetic abnormality such as a mutation in a specific gene.

Recent research has also shown a possible link between meningioma and hormone levels.

What are the symptoms?

The symptoms of meningioma can be very different depending on where the tumour is.

The signs are usually caused by movement of the brain or pressure within the brain or because the tumour presses on other parts of the brain and not because the cancer cells have invaded another area.

However, these tumours grow so slowly that you may not be aware of them for years. They can grow in and around important cranial nerves that may affect

- eyesight
- taste
- smell
- sensation (numbness)
- swallowing or other movement.

They may cause seizures or muscle weakness.

Some people have sudden unexplained severe headaches (which may be accompanied by nausea and/or vomiting) or recurring headaches as the first signs of a meningioma.

Sometimes an eye test can show an abnormality, which when further investigated is linked to a meningioma.

Planning your treatment

To plan the right treatment for you, doctors need as much information as possible about the type, position and size of the tumour.

Firstly, you will have a thorough examination to assess the effect the tumour is having on your brain.

Once doctors suspect you have a brain tumour, you will have to undergo some or all of the following tests.

- CT brain scan (Computed Tomography) is a specialised X-ray. It will take 20-30 minutes.
- MRI brain scan (Magnetic Resonance Imaging) is a specialised imaging technique that gives very clear pictures of the brain and will show where and how big the tumour is. It usually takes 30-40 minutes and uses magnetism instead of X-rays. People with pacemakers cannot have this test and those with any other metallic implants should tell the doctor well before the test
- EEG (Electroencephalogram) measures the electrical activity coming from the brain. It does not use pictures but tells a little about how the brain is working. It can confirm seizures linked to the tumour.

Your treatment

The treatment for a meningioma depends on a number of factors including your general health, how big and where the tumour is and your symptoms.

Surgery: Doctors normally prefer to operate on a meningioma and in many cases the tumour can be taken out completely.

Any operation can be risky, and the doctors will decide in consultation with you if risk from the tumour is greater than the risk of having an operation.

- For meningiomas near the surface of the brain, surgery is often the best option.
- For meningiomas that are deeper (cavernous sinus, medial sphenoid wing, parasellar, skull base and clivus), it may be more difficult to remove the whole tumour or it may involve too much risk to the cranial nerves or blood vessels.

Meningiomas sometimes come back, especially those that are atypical (on the borderline between benign and malignant). Radiation therapy may then be used to control their regrowth, whereas radio surgery is often used to control small meningiomas.

Radiation therapy

Radiotherapy may be used after the operation if the meningioma cannot be totally removed, to destroy any tumour cells left behind.

Radio surgery

Also known as stereotactic radiotherapy (SRT) or gamma knife (a trademark for a type of machine used for this treatment). This method is used on meningiomas that are difficult to reach or very small. The treatment involves focusing radiation beams, which precisely targets the tumour with little impact on healthy brain tissue.

Radiation is given in more, smaller treatments over a number of weeks (often 30 sessions given over six weeks). This means the total dose is higher than in standard radiation, because it allows normal brain tissue to recover better.

It stops the tumour from growing in most cases and in some people it may even cause the tumour to shrink. Each treatment is called a "fraction" therefore this type of therapy is sometimes called "fractionated" therapy.

This treatment is only available in specialist hospitals and is not suitable for everyone with a brain tumour.

Chemotherapy

Chemotherapy is the use of anti-cancer drugs to destroy cancer cells. Chemotherapy is very rarely used for treating a meningioma although research into using this form of treatment for meningiomas is ongoing. The use of drugs is limited by the fact that meningiomas usually grow very slowly and therefore do not react to chemo drugs.

Watch and wait

Do nothing, but monitor the tumour on a regular basis for example with an annual MRI. Because meningiomas usually grow slowly, it may be better to monitor it rather than treat it in another way, if the tumour is not causing problems, particularly in older patients.

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Registered charity 1117538

Company limited by guarantee and registered in England no. 5983336

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