Surgery for Vestibular Schwannomas (Also known as acoustic neuromas)

Why do I need surgery for my vestibular schwannoma?

It is likely you have been offered surgery for your vestibular schwannoma due to the size of your tumour, the symptoms you are experiencing, or because your tumour is growing. Large tumours, or tumours that keep growing can put pressure on the brain stem causing a number of problems including (but not limited to) hearing loss, balance dysfunction, facial numbness and /or twitching, facial weakness, papilloedema (swelling of the optic nerves leading to vision loss) and hydrocephalus (fluid in the brain). It may be that you have already had stereotactic radiosurgery to your vestibular schwannoma and that your tumour unfortunately continued to grow.

Why can't I have stereotactic radiosurgery?

Whilst stereotactic radiosurgery (SRS) is very effective in controlling tumour growth, it is not a suitable method of treatment for very large tumours or tumours causing compression of the brain stem. This is because after SRS tumours can swell for a short period of time, and although medication is given to suppress this swelling, if large tumours swell it can cause problems. SRS is also not usually a choice of treatment if you have already had SRS in the same location before. This is due to the side effects and the increased risk of secondary tumours later in life that is associated with radiotherapy. Another reason SRS might not be appropriate is if your tumour is causing symptoms that can only be treated through surgery.

What does the surgery entail?

There are two main approaches in the surgery we perform:

- A Translabyrinthine approach
- A Retrosigmoid approach.

Translabyrinthine approach

This involves a C-shaped incision behind the ear and allows the surgeon to remove the mastoid bone (the bone behind the ear) as well as a portion of the inner ear. This is the most direct route and is often used for tumours that have already caused a significant degree of hearing loss. This is because during the translabyrinthine approach the inner ear is sacrificed which means there will be no hearing in that ear after surgery.

This approach also allows for early identification of the facial nerve (7th cranial nerve) which is important for preservation of facial function.

Retrosigmoid approach

This approach involves an incision on the scalp further behind the ear to open part of the skull called the occipital bone (bone at the back of the head) located behind the mastoid bone. It can allow hearing preservation in patients who still have serviceable hearing but only with relatively small tumours. Sometimes in larger tumours a large amount of the tumour needs to be debulked (removed) before the cranial nerves can be identified which increases the potential for nerve damage. In larger tumours the chance of preserving hearing is low and in some patients with very large tumours a translabyrinthine approach may be recommended.

In both approaches, the cranial nerves, especially the facial nerve, will be identified and monitored with special equipment throughout the surgery.

To ensure preservation of the cranial nerves your surgeon might leave small amounts of tumour behind. You may hear this being called a 'near total resection' or 'subtotal resection'. This is a common surgical approach in the UK, particularly for large tumours.

Your surgeon will discuss with you which approach they think is best for you. This will depend on tumour size, location and hearing, as well as any preference you might have. Your surgery will be performed by both an ENT surgeon and a Neurosurgeon and you will be given the opportunity to meet both.

After your surgery, it might be recommended you have SRS to treat any residual tumour that is left behind.

Are there any risks?

As with all surgery there are risks associated with surgery for vestibular schwannomas. The main risks are hearing loss, permanent or temporary damage to the facial nerve resulting in facial palsy and CSF (cerebrospinal fluid) leaks. Other risks include post-operative headaches, stroke, thrombosis (blood clots), infections, death and the need for further surgery. There is a risk of damage to the lower cranial nerves which can result in problems with the voice, eating and swallowing. This might also cause a problem in protecting the airway and in rare cases, a tracheostomy (a hole made in the windpipe to help you breathe) might be needed. There is also a risk to the nerves that supply movement to the eyes and double vision can occur after surgery. Although these can be serious if they occur, the risks of them occurring are small.

For very large tumours facial weakness is common but for most patients temporary.

Your surgeon will go through all the risks with you in detail so you can make a fully informed decision.

It is worth noting that the above risks can occur if the vestibular schwannoma is left to grow.

What are the benefits of surgery?

The aim of surgery is to remove as much of the tumour as safely possible to take pressure off the brain and relieve any neurological symptoms you may be experiencing. It may also be recommended to reduce the chance of a complication from growth of the tumour

Post-operative care

After your surgery you will most likely be admitted to a critical care bed or an EPOC (enhanced post-operative care) bed for close monitoring for 24-48 hours.

You will have a head bandage in place that will need to stay for 4 days. You will also have a urinary catheter (tube to drain the bladder) in place until you are able to mobilise to the toilet.

A degree of imbalance is expected, and staff will help you get up and about and to ensure you are safe to mobilise post-operatively. If you struggle with your balance and walking post-operatively you will likely get physiotherapy input whilst on the ward. If you need assistance or any special equipment at home this may be arranged whilst you are an inpatient.

Should you experience any voice or swallowing problems post-operatively you will be seen by Speech and Language Therapists on the ward who will assess you to ensure you are safe to eat and drink and whether any short-term dietary adjustments need to be made.

If you have a facial weakness following your surgery this may interfere with the ability to blink and close the eye which risks the surface of the eye drying out and causing damage to the cornea (clear surface of the eye). To prevent this from happening you will need to care for the eye using regular lubricating drops, ointments and taping the eye closed at night. You will be taught how to do this on the ward. You might also need to be seen by an Ophthalmologist (specialist eye doctor).

If you do have any facial weakness following your surgery, you will be seen by our specialist facial physiotherapists. This can sometimes be on the ward but will usually be as an outpatient.

You may find you have headaches post operatively. You will be given effective pain relief on the ward but please do speak to your surgical team and nursing staff if you feel this is not working.

Driving

Following your surgery please discuss with your consultant or surgical team about when it is safe for you to drive again and whether you need to inform the DVLA.

If you experience sudden and disabling dizziness you need to inform the DVLA.

Please access the DVLA website for more information using the link below.

www.gov.uk/acoustic-neuroma-and-driving

Should you have any questions regarding your surgery, please contact the Skull Base CNS team as below:
01213715390
Skullbasecns@uhb.nhs.uk

Alternatively, you can find support from the British Acoustic Neuroma Association
www.bana-uk.com

Department address

ENT
Queen Elizabeth Hospital
Mindelsohn way
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B15 2TE

Accessibility

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