Transsphenoidal hypophysectomy

Before the operation

Your pituitary functions will be assessed by the endocrine team. You will have undergone an MRI scan of the pituitary gland and you will be seen by the neurosurgeon in the outpatient clinic or the hospital ward to assess whether this kind of surgery is suitable for you. The neurosurgeon will discuss with you the options for treatment and the benefits and potential risks of each option available to you.

You will come into hospital the day before the surgery and meet the junior doctors and nurses who will be looking after you. You will have blood tests, a chest X-ray and electrocardiogram to assess your fitness for anaesthetic. You will be visited by the anaesthetist (the doctor who will put you to sleep for the operation). You need to have fasted (nothing to eat or drink) from midnight before the day of surgery.

Should I stop any medicines before coming into hospital?

If your pituitary gland is hyperactive and you are on medicines to reduce the effect of the hyperactivity (e.g. Bromocriptine, metyrapone, etc) you should continue these medicines. Similarly, if your pituitary gland is underactive and you are receiving hormone replacement (e.g. hydrocortisone, thyroxine) you should continue these medicines.

You may be given hydrocortisone 100 mg four times on the day of the surgery and it may be continued for few days after surgery as your body needs this hormone and your gland may not be able to produce it in sufficient quantities.

Some medicines increase the risk of bleeding during the operation and need to be stopped, For example, Aspirin and Ibuprofen need to be stopped for at least 7 days before surgery. You may use paracetamol or dihydrocodeine for pain instead. If you are on blood thinning medications that can't be stopped, you need to inform the neurosurgeon. If you are on the Oral Contraceptive Pill or HRT you should discontinue these at least 4 weeks before surgery.

The operation

The operation is called *trans-sphenoidal hypophysectomy* or *trans-sphenoidal resection*. You will have a general anaesthetic. The operation is through the nose. This will allow the surgeon to reach the pituitary fossa where the adenoma lies. The surgeon will be using key-hole surgery to remove the adenoma or some/all of the pituitary gland. At the end of the operation the neurosurgeon will make a decision about the need to insert a fat graft to stop fluid leakage (one of the potential complications of trans-sphenoidal surgery). Fat

grafts are obtained from the outer side of your right thigh.

After the operation

The operation takes about 1-2 hours.

When you wake up, you will notice the following:

- Your nose will be packed to stop bleeding and you will have to breathe through your mouth.
- If a graft was necessary, you may feel the site of incision in your thigh.
- You will have a drip attached to your arm.
- You may have a urinary catheter to monitor your fluid output.

Once you are in the ward, you will be allowed to eat and drink when you have recovered from the anaesthesia. Your fluid intake will be restricted to two litres a day for the first two days. You will need to let the nurses know the amount of urine you pass for few days. Your blood will be tested the day following surgery. The nasal pack stays in for about two days. Once the nasal pack is removed you will feel moisture coming through your nose. Blood stained mucus is common for a short while. If all is well you will be discharged home two days after the operation. There are no sutures to be removed. Do not blow your nose or insert anything in the nose.

Potential complications of surgery:

There are potential risks associated with the surgery:

- *Hypopituitarism*: following surgery the pituitary gland may become underactive and you may need hormone replacement therapy. You are likely to be given hydrocortisone on the day of surgery, and regularly thereafter, until you are assessed post operatively, as week one, and week six post-surgery.
- *Diabetes Insipidus (DI*): excessive thirst and passing a lot of urine is not uncommon in the first few days following surgery. It usually settles within a few days but a small number of patients will need lifelong hormone replacement to control this.
- *Cerebrospinal fluid leak (CSF) leakage*: fluid leakage from the nose can occur in 3.5% of patients following this surgery. If it occurs after the nasal pack is removed, it may require diversion of the CSF away from the site of surgery or another operation to repair the wound.
- *Infection:* This can include infection of the pituitary gland forming an abscess or meningitis. The risk is very small and the vast majority are treatable by antibiotics. You will be given antibiotics during surgery and until the nasal pack is removed.
- *Bleeding:* Rarely, nasal bleeding can occur or bleeding in the cavity of the adenoma. If the latter occurs it may lead to deterioration of vision as the visual nerves are very close by.
- *Visual impairment*: very rare.

Follow up:

Arrangements will be made for you to be reviewed in the neurosurgical and endocrine outpatient clinics. You will need pituitary function tests and further MRI scans to assess the pituitary gland.

Driving

The DVLA recommend that, provided there is no visual defect, you may drive following recovery. Visual field assessment will be done one week after surgery. If there is a visual defect then driving is only permissible if certain requirements are met which will require examination by an ophthalmic expert in such matters.

Where can I learn more?

Contact the Pituitary Foundation at:

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Tel: 0845 450 0375
e-mail: helpline@pituitary.org.uk
Websites: www.pituitary.org.uk

More information is available on the Trust website www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

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