



## Nephrology and Surgical Department Parathyroid Surgery in Adults

This leaflet explains surgery to treat *Primary Hyperparathyroidism*. It will help you to understand the operation and the care that you will receive.

If you would like additional information about the Parathyroid glands and what the operation involves, please speak to one of the doctors or nurses. They will be more than happy to help.

### What are the Parathyroid glands and what do they do?

Usually, you have four parathyroid glands. These are located between the thyroid gland and the windpipe, two on each side. In healthy adults, each parathyroid gland is usually 3-4 mm in size. They are responsible for the secretion of a hormone (the parathyroid hormone, PTH) which is required for the regulation of calcium in the body.

### Reasons why patients may need parathyroid surgery:

One common cause of high calcium in the body is due to an abnormal parathyroid gland which is 'over-functioning' and producing too much PTH.

In the majority of patients, this is due to a single abnormal parathyroid gland (Primary Hyperparathyroidism). In some instances, more than one gland is involved.

PTH acts on the kidneys, bone and gastrointestinal tract (stomach and bowel) to increase the level of calcium in the blood. Although high calcium may be associated with symptoms, many patients have their high calcium detected coincidentally on routine blood tests.

Symptoms that may be associated with high calcium can include:

- Muscle weakness and fatigue
- Changes in your heart rate
- Weight loss
- Excessive thirst
- Changes in urinary frequency
- Dehydration
- Stomach ulcers
- Kidney stones
- Fractures

Even in patients who do not have symptoms due to high calcium, parathyroid surgery is recommended, as surgery decreases the long-term effects on the bones and kidneys.

## **What are the alternatives to surgery?**

Medication does exist to control the high calcium in the blood. You may already have discussed these options with your endocrinologist or nephrologist prior to referral to the surgical clinic. Medical treatment generally provides only temporary benefit, and does not address the underlying problem of the overactive parathyroid gland.

## **PRIOR TO SURGERY**

### **What tests would I expect to have before surgery?**

Prior to referral to the surgical clinic, blood and urine tests are likely to have been performed by your endocrinologist or nephrologist. In addition to this, all patients would need to have an ultrasound scan of the neck and kidneys. A specialized scan called a *Sestamibi scan* would also be required in the majority of circumstances. For the minority of patients, a CT scan or an MRI scan may be required.

### **Medication changes prior to surgery:**

If you are taking any regular medications, you should continue these unless advised otherwise. Exceptions to this are:

- If you are taking a medication called Cinacalcet, this should be stopped the day before admission for the surgery.
- If you are taking any of the following medications, Aspirin, Apixaban, Clopidogrel, Dabigatran, Dipyridamole, Edoxaban, Prasugrel, Rivaroxaban, Ticagrelor or Warfarin, please discuss your treatment with your surgeon as they may ask you to stop these prior to surgery.

### **Renal patients:**

If you have been referred by a Nephrologist you should have received a prescription for Alfacalcidol and Sandocal on referral to your surgeon. Three days prior to your surgery, start taking Alfacalcidol and Sandocal as prescribed. If you have not received a prescription for these medications please contact the Renal secretaries at Dorset County Hospital for a prescription on 01305 255269.

If your surgery is cancelled stop taking this medication and await further instruction from your surgeon and nephrologist.

## **THE SURGERY**

### **What type of parathyroid operations should I expect?**

The operation is performed under a general anaesthetic so you are completely 'asleep'. There are generally two approaches to parathyroid surgery:

#### **Open Operation:**

Also called cervical exploration or bilateral neck exploration. The surgeon will make a small incision (5 to 7cm or 2 to 3 inches) in your neck in order to perform the surgery. The

advantage of this type of surgery would be to ensure that all four parathyroid glands are inspected, and the diseased gland is removed.

### **Focused Operation:**

Also known as minimally invasive approach or keyhole approach. The use of the preoperative scans has allowed more accurate identification of the diseased parathyroid gland in some patients. Thus, in these patients a smaller scar can be used. Only the gland identified to be diseased on the scan(s) is removed.

Your surgeon will explain which one you are advised to consider and why. In both cases, the wound is then stitched with dissolving stitches or removable stitches. It will heal to form a scar.

### **What are the possible complications of parathyroid surgery?**

Complications of parathyroid surgery are uncommon. The vast majority of patients have straightforward surgery and are discharged the following day without any complications.

However, as with any surgical procedure, there are some risks associated with the operation. These complications include:

- Voice changes
- Low calcium levels
- Calcium levels remaining high despite surgery
- Bleeding after the operation
- Neck numbness
- Swallowing difficulties
- Scar
- Wound infection
- Wound swelling

These complications will be fully explained to you by your surgical team prior to surgery where your surgeon will discuss the benefits and potential complications of surgery with you in detail. Please feel free to ask any questions that are on your mind.

### **Consent:**

Informed consent will be obtained prior to the procedure. Staff will explain all the risks, benefits and alternatives before asking you to sign a consent form. If you are unsure about any aspect of the treatment proposed, please do not hesitate to speak with a senior member of staff.

## **AFTER THE SURGERY**

### **What can I expect after the operation?**

It is normal to feel tired following parathyroid surgery. The symptoms of tiredness that you may have had pre-operatively may take a few weeks to resolve.

In some cases, following parathyroid surgery, the levels of calcium in your blood can fall too low. This is while the body regains control of calcium balance in your blood stream. Your surgical team will check for this with postoperative blood tests and you may be prescribed calcium tablets should these levels fall too low. If you feel tingling or spasms in your lips, fingers or toes inform the medical staff on your ward, or if they occur after discharge contact your GP as this can be a sign that your blood calcium may have fallen too low.

Following a neck exploration, you should be able to eat and drink normally, but some patients feel as though there is a lump and/or discomfort in their throat when they swallow. This is common and will disappear in time.

## **How long will I be in hospital?**

This depends very much on what procedure you had and the post-operative blood results. For most patients, an overnight stay is sufficient.

## **GOING HOME**

### **Care of your wound:**

When you are discharged from hospital you can expect to be given advice about the care of your wound from the ward staff. The wound may be covered by a dressing and this can usually be removed after 48 hours unless you are told otherwise. You will usually be able to take a bath or shower 48 hours after your operation. Gently pat your wound dry rather than rub it.

Your wound may be slightly raised and pink or red in the days following surgery. This will settle over time as it heals. Eventually the wound should become flat and pale but this may take several months.

Unless suggested by your medical team, it is not advisable to rub any ointments or bio-oils onto the wound immediately after your surgery before the wound has had chance to heal. It is best to wait until you have been seen in the postoperative clinic to discuss with your surgeon if you wish to use such products. Some people like to wear a loose scarf to cover the wound.

### **Driving:**

Before resuming driving you need to ensure that you can make an emergency stop without hurting your neck. You also need to be able to comfortably turn your neck to look around as you drive, for example, when you change lanes. You should inform your car insurance company that you have had a parathyroid operation as different insurers may have their own rules about how long you should wait until you can resume driving.

### **Returning to work:**

Your return to work depends on the type of work you do and the operation you have had. You may be able to return to office-based work after two to three weeks and heavier work after four weeks. Your surgical team will advise you.

**Contact Numbers:**

If you have any further questions about your surgery, please telephone Pre-operative Assessment on 01305 254222.

If you have any further questions about your pre-operative calcium loading medicines, please call the Medicines Helpline on 01305 255171 (Mon-Fri: 9.00am to 5.00pm, closed on bank holidays).

You may also email [medicines.information@dchft.nhs.uk](mailto:medicines.information@dchft.nhs.uk)

**Useful Websites:**

British Association of Endocrine and Thyroid Surgeons

<http://www.baets.org.uk/>

**What to take and when guide (to be completed by renal doctor):**

MEDICINE	Alfacalcidol	Sandocal	Cinacalcet	Sevelamer	Lanthanum
3 days before surgery					
2 days before surgery					
1 days before surgery					
Day of surgery					

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References:

British Association of Endocrine & Thyroid Surgeons. *Patient Information Leaflet P2 Potential Consequences of Parathyroid Surgery*. [Online] London: British Association of Endocrine & Thyroid Surgeons. Available at: <http://www.baets.org.uk/wp-content/uploads/Patient-Information-Leaflet-P2-Consequences-of-Parathyroid-Surgery.pdf> [Date accessed: 20 July 2017].

British Association of Endocrine & Thyroid Surgeons. *Patient Information Leaflet P1 Parathyroid Operations in Adults*. [Online] London: British Association of Endocrine & Thyroid Surgeons. Available at: <http://www.baets.org.uk/wp-content/uploads/Patient-Information-Leaflet-P1-Parathyroid-Operations-in-Adults.pdf> [Date accessed: 20 July 2017].

If you have feedback regarding the accuracy of the information contained in this leaflet, please email [pals@dchft.nhs.uk](mailto:pals@dchft.nhs.uk).



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