

## PRIMARY HYPERPARATHYROIDISM (HPT)

The parathyroid glands are small glands usually situated behind the thyroid gland at the base of the neck and which produce parathyroid hormone (PTH) which controls the level of calcium in the blood. There are normally four parathyroid glands; although they are situated close to the thyroid gland their function is completely unrelated to that of the thyroid. The control of blood calcium levels is important for the proper functioning of the brain and nervous tissue and the maintenance of healthy bones. Too much PTH leads to too high a level of calcium in the blood and this can have various damaging effects, especially on the skeleton and kidneys. One of the surgical team will have discussed with you why it is necessary to remove one or more of your parathyroid glands to control the overproduction of PTH. Usually there is only one abnormal gland but there may be two or more affected glands. Parathyroid cancer is very rare and the abnormality in the parathyroid glands is nearly always benign.

### The Operation

During your operation the surgeon will attempt to find and remove the abnormal parathyroid gland or glands and identify, inspect and possibly take samples from the other parathyroid glands. Abnormal glands may not be found at the time of operation in about one patient in twenty. One reason is that the gland may be so small or hidden that it cannot be found or seen. This happens very rarely. Another reason may be that the gland lies not in the neck but in the chest. If that is the case you may need another operation at another time to remove it.

Operations on the parathyroid glands are very safe but sometimes there are complications and this section summarises these for you.

#### Scar:

The scar may become relatively thick and red for a few months after the operation before fading to a thin white line. Very rarely some patients develop a thick exaggerated scar but this is uncommon.

#### Voice Change:

It is virtually impossible to operate on the neck without producing some change in the voice; fortunately this is not normally detectable. A specific problem related to parathyroid surgery is injury to one or both of the recurrent laryngeal nerves. These

nerves pass close to the thyroid gland and control movement of the vocal cords. Injury to these nerves causes hoarseness and weakness of the voice. The nerve may not work properly after parathyroid surgery due to bruising of the nerve but if this should occur, it recovers over a few weeks or months. Rarely, the nerve may be permanently injured and the function will not recover. The external laryngeal nerve may also be injured and this results in a weakness in the voice although the sound of the voice is unchanged. Difficulty may be found in reaching the high notes when singing, the voice may tire more easily and the power of the shout reduced. Careful surgery reduces the risk of permanent accidental injury to a very low level but cannot absolutely eliminate it. Injury to both recurrent laryngeal nerves is extremely rare but is a serious problem and may require a tracheostomy (tube placed through the neck into the windpipe).

Other hazards:

Most parathyroid operations are straightforward and associated with few problems. However all operations carry risks which include postoperative infections (e.g. in the wound or chest), bleeding in the wound and miscellaneous problems due to the anaesthesia, but these are very rare. Bleeding in the wound can be a serious problem if it occurs but the chance of a significant bleed needing you to return to the operating theatre within a day or two after your operation to clear out the blood is small (in the region of 1` in 50).

## The Results of Surgery

From the situation of having too high a level of calcium before the operation, the calcium often falls to quite a low level shortly after the operation. This is because the other glands have become lazy or under active. The other glands will recover their normal function quite quickly but you may require calcium and vitamin D tablets temporarily after the operation to boost the level of calcium in the body. Rarely, the other glands may not recover and you will need to take calcium and/or vitamin D tablets.

Operations to correct HPT are intended to remove or reduce symptoms which you are having which may be attributable to the HPT. You should discuss with your surgeon or medical doctor the reasons why you have been referred for surgery and their expectations of improvement. Parathyroidectomy may be effective at controlling the HPT and reducing future damage but may not necessarily improve your current symptoms.

I confirm that I have read the above and have discussed any queries with the surgical team.

Name .....

Signed .....

Date .....

Note: If you search the Internet for information on this subject you should remember that some sites will describe calcium levels using different units of measurement. Additionally many sites are in effect advertising for patients and may propose untried or non standard procedures and treatments, so beware and discuss what you read with your doctors.