

## **TALLAHASSEE EAR, NOSE & THROAT - HEAD & NECK SURGERY, P.A.**

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### **HYPERPARATHYROIDISM**

#### **BACKGROUND**

The diagnosis of hyperparathyroidism became much more common with the advent of modern blood testing. Fortunately, most people now find out the diagnosis when they have only mild or no obvious problems. The “hyper-“ means there is too much, and the problem is too much of the parathyroid hormone produced by the parathyroid glands. When there is too much of the parathyroid hormone, the amount of calcium in the blood increases. This can cause problems with just feeling generally bad, or having stomach pain. Since some of this calcium comes from bone, hyperparathyroidism can result in weakened bones which may fracture. Since there is too much of the calcium being filtered by the kidneys, hyperparathyroidism can lead to kidney stones. Generally, there are 4 parathyroid glands but there may be 3 or as many as 12! The challenge with hyperparathyroidism is to find the gland or glands that are overproducing the parathyroid hormone.

#### **EVALUATION**

We sometimes talk about the 4 “-ones” (rhymes with bones) of hyperparathyroidism. These would be bones (too thin and brittle), stones (as in kidneys), abdominal groans (pain in the stomach area), or psychic moans (you just don’t feel good). The initial abnormality is often the high calcium level in the blood. Further evaluation may be done by a primary care provider, by an endocrinologist (they specialize in glands and hormone problems), or by a head and neck specialist. The medical evaluation generally includes 1) any relevant family history, 2) parathyroid hormone, calcium (repeat) and creatinine blood tests, and 3) urine calcium and creatinine levels. Most specialists will order a Sestamibi scan to help localize the abnormal parathyroid gland or glands. Other evaluations of the neck and chest could include an ultrasound, CT, or MRI.

#### **CAUSES OF HYPERPARATHYROIDISM**

About 85% of the time the Sestamibi scan will show an abnormal growth of a parathyroid gland called an adenoma. The surgical approach is relatively simple when the scan reveals a single abnormal gland called an adenoma. Sometimes all the glands are enlarged, a condition called hyperplasia. Other times, there may be an extra parathyroid gland or glands, and they may be hidden anywhere from the upper neck to within the upper chest cavity.

#### **TREATMENT OPTIONS**

Medical treatment options are limited and primarily directed towards keeping the calcium at a reasonable level. When to consider surgical treatment is sometimes a difficult decision. It is relatively straightforward to decide on surgery when the hyperparathyroidism is associated with a complication such as moderate to severe osteoporosis, kidney stones, or unexplained abdominal pain. What if you just don’t feel well? If your parathyroid scan is positive, this usually means there is a single parathyroid gland that is the problem. In this situation, surgical intervention is almost always straightforward and curative. If your scan is negative, surgical intervention may still be the best option and is most often curative. However, the approach may be slightly more complicated. Even so, it can usually be performed as an

outpatient and recovery is usually fairly easy so that you can be back at work in a week. If a person is having minimal problems associated with hyperparathyroidism, there is little risk to watchful waiting and reevaluation of the bones and other symptoms from time to time. There is almost never a need to be in a hurry making a decision- one that at times can be quite complex.

### **POTENTIAL COMPLICATIONS**

Complications such as bleeding and infection can occur with any surgical procedure but are very unusual. Because the nerves to the larynx or voice box may be close to the parathyroid glands, they can be injured temporarily or permanently. This can result in a mildly hoarse voice, or if it occurs on each side, could result in the need for a tracheotomy. A problem with one vocal cord nerve may occur less than 1% of the time but we have never had a problem with both vocal cords from parathyroid surgery at Tallahassee ENT. Rarely, you could have a problem with low calcium after this surgery. This is more likely to happen if you have parathyroid hyperplasia when all the parathyroid glands are abnormal. Recurrence of hyperparathyroidism rarely occurs.

### **BENEFITS OF SURGERY**

After surgical cure of hyperparathyroidism, bones become stronger and more normal, there is less chance of more kidney stones, and there is improved sense of well being and improved quality of life. The last benefit is harder to understand, but has been proven in a number of studies.

### **THE TALLAHASSEE ENT APPROACH**

We believe that our group can make your surgery as safe and as successful as you can receive anywhere. We do not think endoscopic approaches are appropriate for this problem. A “minimal” approach is possible when a positive Sestamibi scan has demonstrated a single abnormal gland. However, you always have to be ready to operate on both sides of the neck. For this reason, we use another head and neck surgeon as an assistant. We strongly feel that is part of the reason for our high success and low complication rate. We often use an intravenous dye, methylene blue, during surgery to help identify the parathyroid glands. Your urine will be blue for as long as 2 weeks, but there have not been any other significant side effects from this dye. We also use an intraoperative blood test of the parathyroid hormone to document that you are indeed cured of hyperparathyroidism.

This information is meant to help outline some of the major issues in dealing with this complicated subject. In no way is it meant to be all inclusive as there are many nuances with each person’s illness and with this particular disease process. Please ask us if there are any other questions that you may have.