Performing Minimally Invasive Endoscopic Surgery For Removing Pituitary Gland Tumors

In March, Ghassan J. Samara, MD, assistant professor of surgery (otolaryngology-head and neck surgery), and Frederick Gutman, MD, assistant professor of neurosurgery, performed together what is believed to be Suffolk County’s first minimally invasive endoscopic operation to treat a pituitary tumor.

Using this new hi-tech approach, Drs. Samara and Gutman successfully removed the tumor, preserved the gland, and repaired a cerebral spinal fluid leak in a patient who quickly recovered from the operation.

Soon after performing this multidisciplinary surgery, Drs. Samara and Gutman did two more successful endoscopic operations to remove pituitary tumors. Additional patients are scheduled for this leading-edge care that offers them considerable advantages over conventional surgery, such as faster recovery, less pain, and no cosmetic problems.

The video camera at the tip of the endoscope gives surgeons a better view of the brain and enables them not only to look around corners and make a full visual assessment, but also to remove the entire tumor in most cases.

Commenting on the advent of endoscopic pituitary tumor removal, Dr. Samara says, “We’ve been using the same endoscopic techniques in sinus surgery for years, and these techniques have been progressing to allow us to treat nasal and eye problems; this was the next logical progression.”

Introducing “Refer a Patient”
Our New Web-Based Referral System

We are very pleased to introduce an exciting new service called “Refer a Patient,” now available to community physicians. This web-based communication service enables physicians to send and receive electronic referrals and requests for consultation, and further strengthens our referral relationships.

“Refer a Patient” has been developed by University Physicians at Stony Brook (UPSB), an affiliate of the physician practices of the full-time faculty at Stony Brook’s School of Medicine. UPSB supports our surgical practice, Stony Brook Surgical Associates, PC.

As UPSB-affiliated physicians, we are committed to maintaining strong ties with community physicians and other healthcare providers, particularly those with whom we share patients. We recognize that good communication is an essential ingredient of strong referral relationships.

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— Head and Neck Oncologic Surgeon
— Surgical Oncologist and Breast Surgeon
— Traumatologist, Intensivist, and General Surgeon

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The pituitary gland, sometimes called the master gland because it controls the functioning of several other endocrine glands, is a small, pea-sized endocrine gland at the base of the brain. Located about 3-4 inches behind the top of the nose, it produces several different hormones that are important in the function of the body.

Although tumors of the pituitary gland are generally benign and do not spread to the rest of the body, they can create multiple functional problems, including blindness and pressure on the brain.

In the past, pituitary tumors were removed using approaches either through the nose or by making a large incision under the upper lip and connecting it into the nose. Then a large retractor would be placed in the nose to keep it wide open for the surgery to be performed with a microscope.

These older approaches have the side effect of causing a cosmetic change in the appearance of the nose or leading to difficulties in breathing through the nose. Not only that, the scarring that develops under the lip after conventional surgery may cause difficulties with eating and other problems.

**WHAT IT IS**

Now the start-of-the-art approach to the pituitary gland is the endoscopic approach. Instead of the large incisions or the approaches through the nose, a thin flexible endoscope—just over ⅛ inch in thickness—is placed through the nose to open the sphenoid sinus (the sinus in front of the pituitary gland).

A computer is used to track the location of the instruments and to give the surgical team an extra margin of safety in locating and opening the sphenoid sinus.

Instruments are used through both nostrils and the tumor is removed under the magnified view of the endoscope. One of the advantages of this approach is the ability to place an angled endoscope within the tumor cavity and to see areas behind ledges not always possible with the conventional approaches using a microscope.

The minimally invasive surgery generally takes 1-2 hours—versus 3-4 hours with the older approaches. The patient generally has much less pain and discomfort. Most patients can go home in a couple of days post-op.

The endoscopic approach also avoids the use of the Mayfield head-holder (pins placed in the head to keep it still), as well as the use of x-rays and radiation during surgery, which were required in the past with the older operations.

Our use of minimally invasive endoscopic surgery for removing pituitary gland tumors further reflects our commitment to excellence in patient care at Stony Brook.