New Minimally Invasive Endoscopic Surgery for Removing Pituitary Gland Tumors Is Now Performed at Stony Brook University Hospital

In March 2005, 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.

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.”

The pituitary gland, sometimes called the master gland because it controls the functioning of several other endocrine glands, is a small egg-shaped 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 large incisions under the 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 in 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 instru-

Benefits of Endoscopic Surgery For Removing Pituitary Gland Tumors

- Elimination of cosmetic problems
- No incisions in nose or under lip
- Less pain or discomfort after surgery
- Post-op nasal packing generally not needed
- No need for placement of head-holder pins
- Significantly shorter procedure duration
- No need for placing large retractor in nose
- Reduced likelihood of scarring in nose
- No radiation used during the procedure
- Better view of tumor cavity for surgeons

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. Pictured here is an endoscopic view showing our team’s successful removal of a pituitary tumor approached via the nasal passage and sinus cavity during the procedure that requires no incision.

The m inimally 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.

For consultations, appointments and more information, please call (631) 444-4121.