New approach to thyroid surgery eliminates neck scar

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As the rate of thyroid cancer continues to climb, doctors are urging patients to be more cautious about thyroid nodules, a common disorder that is responsible for a small but growing number of thyroid cancer cases. Thyroid nodules affect nearly 13 million Americans and are a result of abnormal cell growth on the gland. Until recently, the only way to remove nodules and rule out cancer was through surgery that required a five centimeter incision across the front of the neck.

The procedure, and the large scar that resulted, was a deterrent for many patients who feared altering their appearance for something that may not be life threatening. Today however, a new option exists that allows surgeons to access the neck through the armpit, allowing for a biopsy of tissue with no visible scar.

"We now have a minimally invasive way of determining if a thyroid nodule is cancerous," said Jose Dutra, MD, head and neck surgical oncologist and director of the Thyroid Surgical Clinic at Northwestern Memorial Hospital. "It's an approach that more patients are comfortable pursuing. If we can identify cancerous cells earlier we increase the chance of removing the cancer before it spreads."

The procedure, transaxillary robotic thyroid surgery, utilizes 3D cameras and specially designed robotic arms to create a small incision within the armpit, the mechanical arms work just like hands allowing the specialized surgeon to operate remotely with precise control and movements to remove suspicious nodules.

"The underarm area has fewer nerve endings than the anterior neck area, so there's less pain, no scarring on the neck, and with good care, the incision will heal faster," said Dutra who is also an associate professor at the department of otolaryngology/head and neck surgery at Northwestern University Feinberg School of Medicine.

This summer, Socorro Delaluz became one of the first patients at Northwestern Memorial to undergo transaxillary thyroid robotic surgery. The mother of two was impressed to have the option that left no visible scar and the quick recovery associated with the technique.

"I didn't want to be reminded constantly, every morning when I get dressed that I had a scar across my neck. I would have to explain to everyone what happened all the time," expressed Delaluz.

Another benefit of the minimally invasive approach is that the precision of the robot allows physicians to remove all of the potentially cancerous tissue while sparing more of the structure surrounding the gland.

"The thyroid gland controls how the body uses energy. Changes to the gland can cause a myriad of health issues," explained Dutra, member of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University.

Thyroid nodules are six-times more common in women than men and can be difficult to diagnose because they often do not present signs or symptoms. Most nodules are small and are often found incidentally during a routine physical or imaging for an unrelated condition. Conditions that can cause one or more nodules to develop in the thyroid gland range from overgrowth of normal thyroid tissue, tumors, a cyst, inflammation and goiters. Individuals should routinely check their neck and should talk with their doctor if they notice any lumps or experience symptoms such as swelling, trouble swallowing, and pain in the throat or hoarseness of the voice.

Robotic surgery is currently widely used for minimally invasive heart and lower abdominal procedures, only recently have the robotic arms been applied to the confined space involved in neck

and head surgery. The benefits for robotic thyroid surgery include shorter recovery period, less pain in neck following surgery and better preservation of the laryngeal nerves and the parathyroid glands.

Jennifer Panaro recently had a large nodule removed from her thyroid gland by way of transaxillary thyroid robotic surgery and was back on the tennis court just six weeks after her surgery. The 28 year old was impressed with the speedy recovery and was pleased her voice was protected. "I was thrilled to not experience any changes in my voice or to have deal with a large scar on my neck. As an accountant, I talk to clients all day and I would be self conscious about having a foreign mark across my throat," said Panaro, patient at Northwestern Memorial.

While the new technology has great advantages, Dutra stresses this option is not the best for all patients and not all tumors can be removed with this approach.

Provided by Northwestern Memorial Hospital