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New robot-assisted surgical method found successful for treatment of thyroid cancer

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Using a novel robot-assisted endoscopic technique, a team of surgeons at Yonsei University College of Medicine in Seoul, Korea, has successfully treated 200 consecutive patients with thyroid cancer. The minimally invasive operation, which has several technical and cosmetic benefits that the traditional open operation does not offer, is described in the August issue of the *Journal of the American College of Surgeons*.

According to the National Cancer Institute, more than 37,000 people are diagnosed with thyroid cancer each year in the United States. Surgical removal of all or part of the thyroid gland - the most common treatment for thyroid cancer - typically requires a three- to five-inch incision across the front of the neck. Although robot-assisted endoscopic operations have been adopted in the surgical treatment of various cancers, the incorporation of these techniques has been delayed in head and neck surgery due to the narrow, deep anatomical space and delicate nerves and blood vessels in these areas.

The use of robots provides surgeons with a three-dimensional view and enhanced magnification of the anatomy, as well as the ability to filter unintentional movements of human hands, enabling a safer and easier operation that preserves structures surrounding the target organ.

"This innovative robot-assisted technique for thyroid surgery represents an exciting new treatment option for patients with thyroid cancer," said Woong Youn Chung, MD, PhD, Yonsei University College of Medicine in Seoul. "Not only does it offer good clinical outcomes, but it also

spares patients from the large, visible scar that results from traditional open surgery."

Over a 10-month period, a surgical team at Yonsei University College of Medicine operated on 200 patients (mean age 40.3 ± 9.5 years) with thyroid cancer by robot-assisted endoscopic thyroidectomy using a novel transaxillary approach. All patients had well-differentiated, local thyroid tumors of at least two centimeters. Using the da Vinci® Surgical System (Intuitive Surgical), a surgeon removed all or part of the thyroid gland by making an incision under the patient's right arm (in the patient's lesion-side axilla), eliminating the need for a neck incision.

After the operation, all patients underwent neck ultrasonography and serum thyroglobulin tests at three- and six-month intervals. Of the 45 patients who had a bilateral total thyroidectomy, 38 received radioactive iodine (RAI) therapy between four and six weeks postoperatively and a body scan two days later to investigate possible abnormal radiation uptake. Seven low-risk patients did not undergo RAI.

In this study, postoperative complications included transient low calcium levels (hypocalcemia) in 12 patients (26.7 percent), transient hoarseness in 8 patients (4 percent) and permanent nerve paralysis in one patient (0.5 percent). Serum parathyroid hormone levels were slightly reduced during the immediate postoperative period but normalized within one month of the operation.

In the patients who underwent bilateral total thyroidectomy, serum thyroglobulin was less than one nanogram per milliliter in 42 patients (93.3 percent). No tumor recurrence was observed by neck ultrasonography at 10 and 18 months postoperatively, and no patient was found to have abnormal radiation uptake.

Source: Weber Shandwick Worldwide (news : web)