



THYROID SURGERY

Racial disparities in thyroid surgery

BACKGROUND

Recent protests over police brutality, as well as the COVID-19 pandemic, have brought to attention the systemic racism that pervades all sectors of our society, including the practice of medicine. No exception exists in endocrinology, where racial inequity is found in many areas, most notably in diabetes care and management.

Thyroid surgery is a commonly used treatment for many non-cancerous thyroid conditions such as goiter, thyroid nodules and Graves' disease. There is already evidence that there are gender, socioeconomic and racial disparities when looking at patients who had thyroid surgery for thyroid cancer or parathyroid disease, with non-white patients having worse outcomes than white patients. In this study, the authors sought to understand whether racial inequalities exist in outcomes after surgery for these conditions.

THE FULL ARTICLE TITLE

Maduka RC et al 2020 Racial disparities in surgical outcomes for benign thyroid disease. *Am J Surg*. Epub 2020 Jul 6. PMID: 32669203.

SUMMARY OF THE STUDY

This study was done by reviewing data collected by the American College of Surgeons National Surgical Quality Improvement Program. This is a database which collects information specific to outcomes after all types of surgery from multiple participating institutions. The population studied consisted of adults older than 17 years old, who had thyroid surgery for a condition other than cancer in the United States, from 2016 to 2017. Data collected regarding the patients demographics included race (Asian, Black, Hispanic, White and other/unknown), sex, age group, body-mass index, previous neck surgery, and the reason for surgery. Outcomes included neck hematoma, injury to the recurrent laryngeal nerve, low blood calcium levels causing symptoms and other general surgery complications.

There were 6187 patients included, the majority of whom were female (81.3%), non-Hispanic white (55%), 40-65

years of age (56.5%) and obese (48%). The majority (92.4%) did not have a previous neck surgery and presented with a goiter (65%). Overall, the rates of complications were low. The most common complication was injury to the recurrent laryngeal nerve in 357 patients (5.2%), followed by a low blood calcium which caused severe symptoms in 336 (4.9%), neck hematoma (2%) and other general complications not specific to thyroid surgery in 128 (1.9%).

Black patients had the highest incidence of neck hematoma (3.1% vs 1.3% in white patients, recurrent laryngeal nerve injury (8.7% vs 4.3%) and other surgical complications. These differences were statistically significant. Hispanic patients had the most incidence of a low blood calcium which caused severe symptoms, but the difference with other ethnicities was not statistically significant.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The conclusion of this study is that Blacks who have thyroid surgery for a non-cancerous condition have a higher risk for neck hematoma, recurrent laryngeal nerve injury and other general surgical complications than White patients. In addition, relative to Whites, Asians have a higher risk for recurrent laryngeal nerve injury.

The causes for these disparities are many, and include a more advanced disease at presentation, access to care, surgeon experience, health literacy and patient mistrust of the health care system. However, many studies have shown that differences in management of thyroid diseases may be contributing to these poorer outcomes in multiple ways. While there are limitations, the strength of this study is its large sample of more than 6800 patients. It highlights the work that needs to be done at understanding all causes of disparities and addressing them in order to improve delivery of health care that results in better outcomes for all patients, regardless of their race.

— Jessie Block-Galarza, MD



THYROID SURGERY, continued

ATA THYROID BROCHURE LINKS

Thyroid Surgery: <https://www.thyroid.org/thyroid-surgery/>

ABBREVIATIONS & DEFINITIONS

Thyroidectomy: surgery to remove the entire thyroid gland. When the entire thyroid is removed it is termed a total thyroidectomy. When less is removed, such as in removal of a lobe, it is termed a partial thyroidectomy.

Hypocalcemia: low calcium levels in the blood, a complication from thyroid surgery that is usually short-term and relatively easily treated with calcium pills. If left untreated, low calcium may be associated with muscle twitching or cramping and, if severe, can cause seizures and/or heart problems.

Neck hematoma: surgical complication where there is bleeding at the site of the incision along with the formation of a blood clot. Most of the time, these are very small but occasionally they are large enough to require returning to the operating room to remove the hematoma.

Recurrent laryngeal nerve: this nerve serves to control the vocal cords and injury to this nerve causes hoarseness. This nerve is located right next to the thyroid on both sides and much of the time during thyroid surgery is spent trying to identify and protect the nerve from injury.

Goiter: a thyroid gland that is enlarged for any reason is called a goiter. A goiter can be seen when the thyroid is overactive, underactive or functioning normally. If there are nodules in the goiter it is called a nodular goiter; if there is more than one nodule it is called a multinodular goiter.

Graves' disease: the most common cause of hyperthyroidism in the United States. It is caused by antibodies that attack the thyroid and turn it on.

Thyroid nodule: an abnormal growth of thyroid cells that forms a lump within the thyroid. While most thyroid nodules are non-cancerous (Benign), ~5% are cancerous.