Introduction: While the thyroglossal duct cyst (TGDC) is the most commonly seen midline neck mass, thyroglossal duct cyst carcinoma is rare (1-2%) with only a few hundred cases published in the literature. The disease can be challenging to diagnose and treat because most TGDC carcinoma are diagnosed post-operatively and data is limited regarding the extent of surgical resection, adjuvant therapy and long-term outcomes. We report a case of papillary thyroid carcinoma arising from TGDC without any evidence of disease in the thyroid gland.

Case Report: A 31-year-old male presented with complaints of progressively worsening dysphagia and weight loss for 4 months. An initial CT neck with contrast revealed a soft tissue mass along the anterior aspect of the thyroid cartilage measuring 3.4×2.0×2.2 cm that extended anteriorly from the base of the tongue, favoring a thyroglossal duct cyst. The thyroid gland appeared normal on this imaging. He was given a 2-week course of antibiotics and pantoprazole with no improvement in his symptoms. He underwent a thyroid ultrasound, which showed a large hypoechoic mass, partially cystic, anterior to thyroid. FNA of the TGDC was suspicious for papillary thyroid cancer. Follow-up CT scan redemonstrated known TGDC with increased size of adjacent lymph nodes, concerning for metastasis. Given FNA results, regional lymph node involvement, and the patient’s symptoms, he underwent successful Sistrunk procedure for TGDC removal. He declined to wait for intraoperative frozen pathology and opted to discuss pathology and next steps after surgery. Pathology of the TGDC confirmed papillary thyroid cancer (conventional type) with uninvolved margins and metastasis to one of four lymph nodes with the largest lymph node being 7 mm. At the tumor board conference, it was recommended he further undergo a total thyroidectomy with possible post-operative radioactive iodine (RAI) treatment. He underwent a total thyroidectomy, and pathology showed benign thyroid gland with a few colloid cysts. Post-operatively, he was started on levothyroxine. He did not have any improvement in dysphagia following both surgeries. After extensive discussion of the risks and benefits of RAI, the patient chose to defer RAI treatment until further evaluation of his dysphagia was completed. Ultimately, the decision was made to monitor with serial ultrasounds and thyroglobulin levels.

Conclusion: Optimal treatment of TGDC carcinoma is debatable. A Sistrunk procedure involving resection of cyst plus mid-portion of hyoid bone is universally recommended for adequate excision of the cyst. However, no clear consensus guidelines exist for further management with total thyroidectomy and/or post-operative RAI. Total thyroidectomy permits excision of unsuspected thyroid carcinomas and enables a better follow-up. However, decisions can vary based on extent of disease, tumor characteristics, demographics, and patient preferences. Management decisions should be made on an individualized basis, using a multidisciplinary and shared decision-making approach.

Presentation: Saturday, June 11, 2022 1:00 p.m. - 3:00 p.m.