

## Ectopic thyroid carcinoma. Case report

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SUMMARY: Ectopic thyroid carcinoma. Case report.

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*Introduction. Ectopic thyroid tissue can be found in many sites, including the tongue, thyroglossal duct, mediastinum, trachea, lung, aorta and abdomen. Ectopic thyroid tissue may also be involved in the same processes as normal, orthotopic thyroid gland. These processes include tumors, inflammation and hyperplasia. The appearance of such tis-*

*sue in rare locations may lead to diagnostic and therapeutic dilemmas.*

*Case report. We report a rare case of ectopic thyroglossal thyroid carcinoma in a 63-year-old Caucasian male with a normal orthotopic thyroid gland.*

*Conclusion. Although 99% of thyroid cancers develop within the thyroid itself, in rare cases a carcinoma can arise in ectopic thyroid tissue located in the neck or in other areas of the body. Though rare, the possibility of an ectopic thyroid carcinoma must always be considered by the surgeon in cases of a pathological mass in the neck.*

KEY WORDS: Thyroglossal duct - Ectopic carcinoma - Thyroid gland.

### Introduction

An ectopic thyroid gland can reside anywhere along its embryologic path. It has been described as initially situated in the foramen cecum and then slowly “descending” to its normal site, in the front of the neck, above the thyroid. The connection between the foramen cecum and normal thyroid is known as the thyroglossal duct (1), that normally begins to atrophy in the seventh week.

Ectopic thyroid tissue is rare, with a reported incidence of 1 in 300,000 (2). Ectopic thyroid parenchyma is most frequently reported in the lingual, thyroglossal and laryngotracheal sites. Cases of ectopic thyroid tissue adjacent to the esophagus, heart, aorta and pancreas have also been described. The probability of carcinoma arising in such tissue is less than 1% (3, 4). To our knowledge, very few reports of ectopic thyroglossal thyroid cancer with a normal eutopic thyroid gland have been published to date. We share our experience of the successful management of such a rare case.

### Case report

A 63-year-old Caucasian male presented to the Surgery Department of the University Hospital of Ioannina, Greece, with an anterior midline infiltrative mass in the neck, above the thyroid, that had appeared 4 months previously. His medical history was unremarkable. Clinical examination revealed no pyrexia, heart rate 80 bpm and normal blood pressure. Physical examination revealed a midline neck mass anterior to the thyroid cartilage. The thyroid gland was normal and no cervical lymphadenopathy was noted.

Following fine needle aspiration (FNA), papillary thyroid carcinoma was diagnosed (Figure 1). A CT scan showed a solid cystic mass located anterior to the thyroid cartilage with a normal thyroid gland.

Surgery was performed under general anesthesia 2 days later (Figure 2), with excision of the mass, total thyroidectomy and neck dissection (Figures 3, 4). Pathological examination revealed a normal thyroid gland, papillary thyroid carcinoma in the cervical mass resected radically and 16 lymph nodes without metastatic involvement.

The postoperative period was uneventful and the patient was discharged from the hospital 3 days later with the recommendation to undergo radioactive iodine therapy. Six months later, the patient remains asymptomatic (Figure 5).

### Discussion

The most common sites for an ectopic thyroid gland are lingual, thyroglossal and laryngotracheal. Other, rarer sites include the esophagus, heart, aorta, duodenum



Figure 1 - Midline mass in the neck after FNA examination.



Figure 3 - Intraoperative image.



Figure 2 - Patient in the operating room.



Figure 4 - Intraoperative image (total thyroidectomy, excision of the mass and neck dissection).

and mediastinum (5). The incidence of ectopic thyroid tissue is reported as 1 in 300,000 in the normal population, mainly affecting females (4:1) (6). The presence of a midline neck mass above the thyroid should raise the suspicion of ectopic thyroid tissue in a thyroglossal duct remnant. The probability of carcinoma arising in ectopic thyroid tissue in thyroglossal duct remnant is reported in the literature as less than 1%, involving in almost in all cases papillary carcinomas, as with our patient (7).

Thyroglossal ectopic papillary thyroid carcinomas are also reported as being associated with foci of papillary thyroid carcinoma in the orthotopic thyroid gland, whi-

le lymph node involvement is estimated to be 7-8% (8). In our case, the eutopic thyroid gland was normal and there was no lymph node involvement. Although carcinomas in ectopic thyroid tissue are very rare, malignancy should be suspected in every midline mass in the neck and preoperative diagnosis with FNA must always be performed, in order to plan the appropriate surgical approach. The extent of surgery and postoperative management (radioactive therapy) are at the surgeon's discretion (9). Ectopic thyroid papillary carcinomas are well differentiated and adequate surgical treatment followed by postoperative radioactive iodine therapy in selected cases can offer very promising results (10).



Figure 5 - Patient 6 months after surgery.

## Conclusion

In conclusion, the diagnosis of ectopic thyroid carcinoma may not be easy, and above all requires surgeons to be aware of and actively consider such a possibility. Even in the presence of a normal thyroid gland, ectopic thyroid carcinoma should be considered in the differential diagnosis of a pathological mass located in the front of the neck, whether on the midline or above the thyroid cartilage.

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