

# Case report and literature review of primary retroperitoneal thyroid carcinoma

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## Abstract

Primary retroperitoneal thyroid carcinoma, a rare disease diagnosed as:

1. Left retroperitoneal tumor
2. Right thyroid tumor. "Left retroperitoneal tumor resection by posterior laparoscopic" under general anesthesia.

Postoperative pathological examination: follicular papillary carcinoma of thyroid. Bilateral thyroidectomy was performed again and the patient was treated with I131. Long-term postoperative symptomatic treatment was given by oral unimethylate. The patient was followed up for three years without any tumor recurrence.

## Case introduction

The patient is a 56-year-old female. She was admitted to hospital on September 6, 2018 due to "left retroperitoneal mass found by CT for half a year"; Physical examination showed: T36.7°C, P80 times/min, R20 times/min, BP101/65 mmHg, no eminence in the bilateral renal area, slight percussion pain in the bilateral renal area, no tenderness in the bilateral ureteral travel area, no obvious filling or tenderness in the bladder area. Auxiliary examination: Contrast-enhanced CT scan in the middle and upper abdomen showed two types of circular nodules with near soft tissue density (arrow in Figure 1) in front of the left kidney, about 31.4 x 27.4 mm in size, with smooth contour. Contrast-enhanced scan showed obvious enhancement in the arteriovenous phase, and blood supply arteries were seen -- mostly benign lesions (Castleman's disease? Neurogenic tumor?). The "retroperitoneal tumor resection under retroperitoneal laparoscopy" was performed under general anesthesia. During the operation, the mass was located retroperitoneally with renal pedicle bladder, adjacent to renal artery and renal vein, with clear boundaries and three smooth and tough nodules, which were completely removed. There were no significant lymph nodes in the whole retroperitoneally, and the profile was pale

**Received:** Apr 25, 2024

**Accepted:** Jun 07, 2024

**Published Online:** Jun 14, 2024

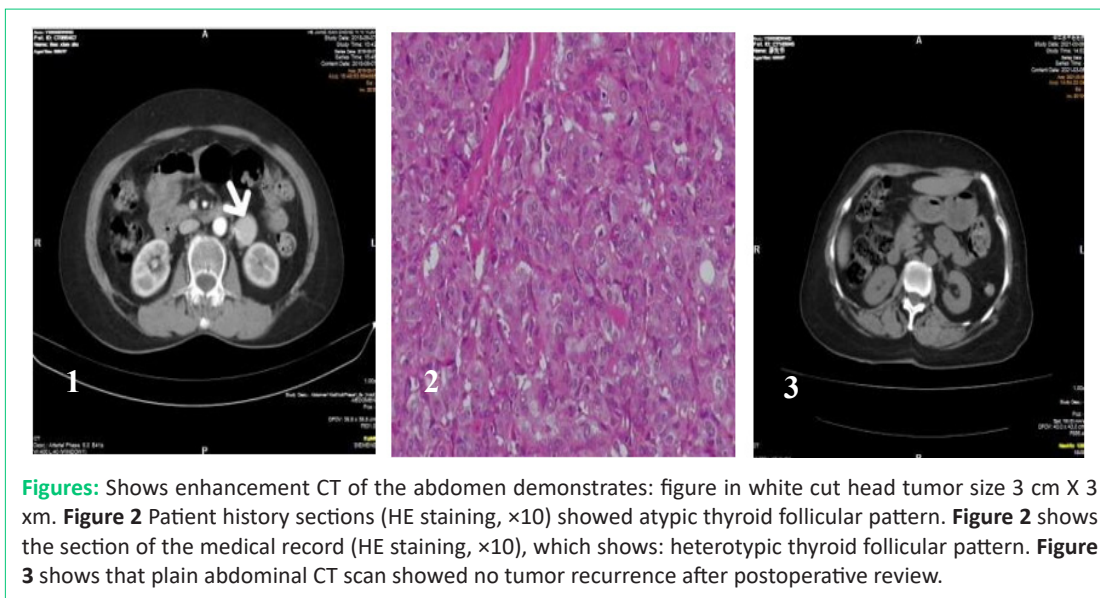
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**Cite this article:** Zhou W. Case report and literature review of primary retroperitoneal thyroid carcinoma. J Clin Med Images Case Rep. 2024; 4(3): 1694.

red. Postoperative examination showed that the histomorphology of the patient was thyroid follicular papillary carcinoma. Immunohistochemistry: TTF-1 (+), TG (+), CK19 (+), HBME-1 (+), Galectin-3 (focal +), Calcitonin (-), BRAF gene mutation: No exon 15 point mutation (V600E) was detected. The patient was diagnosed with retroperitoneal papillary thyroid carcinoma. Bilateral thyroidectomy under general anesthesia. Postoperative thyroid disease examination results showed that thyroid follicular adenoma, part of the follicular epithelium hyperplasia active. Half a month after discharge, the patient received systemic I131 radiation therapy and was discharged from the hospital with oral thyroxine tablets for life.

## Discussion

At present, there is no report of primary retroperitoneal thyroid carcinoma at home and abroad, which has nothing to do with autothyroid, and may be the result of retroperitoneal embryonic tumor changes. Diagnosis requires imaging to indicate retroperitoneal tumors and excision to confirm thyroid cancer. Need to be distinguished from other identified retroperitoneal tumors, such as mesenchymal tumors, malignancies (including sarcomas and current neurogenic tumors), parasympathetic tumors, extragonadal germ cell tumors, and lymphoid tumors



**Figures:** Shows enhancement CT of the abdomen demonstrates: figure in white cut head tumor size 3 cm X 3 xm. **Figure 2** Patient history sections (HE staining,  $\times 10$ ) showed atypic thyroid follicular pattern. **Figure 2** shows the section of the medical record (HE staining,  $\times 10$ ), which shows: heterotypic thyroid follicular pattern. **Figure 3** shows that plain abdominal CT scan showed no tumor recurrence after postoperative review.

[1]. It also needs to be identified with adrenal tumors. CT scan and clinical symptoms can be preliminarily determined. Wagenknecht LV proposed that 70-80% of primary retroperitoneal tumors are malignant, mostly sarcomas [2]. The treatment of retroperitoneal thyroid carcinoma is mainly surgical resection and treatment with I131 after clearing the nail. The prognosis is good. If the recurrence and growth are similar to other retroperitoneal tumors, leading to complications such as rupture, bleeding, intestinal obstruction, pain, etc., severe patients may even die [3].

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