



CASE REPORT

Spontaneous remission of primary papillary thyroid carcinoma: case report

Gabriela De Martin Silva^{1*}, Vinicius Antunes Freitas¹, Flávio Sirihal Werkema¹, João Batista de Oliveira Andrade¹, Roger Lanes Silveira¹

Abstract

Papillary thyroid carcinoma (PTC) is the most common thyroid neoplasm and its spontaneous remission is an extremely exceptional event. In 2010, a 76-year-old male patient was diagnosed with CPT. Thyroid ultrasonography indicated echographic characteristics of a solid nodule in the distal third of the right lobe, isoechoic, perinodal vascularization, punctate calcification, measuring 10x7.3mm. The cytological report obtained after the Fine Needle Aspiration Biopsy (FNAB) pointed thyroid papillary tumor, indicating total thyroidectomy, surgical proposal refused by the patient. Ten years after the initial diagnosis and clinical follow-up, a cervical Doppler ultrasonography indicated the presence of a solid nodule in the lower third of the right lobe, hypoechoic, regular contours, Chammass II, absent calcification, Ti-RADS 4, measuring 0.7x0.6 cm. In addition, a new cytological report after the FNAB indicated a benign pattern in the sample and spontaneous tumor remission.

Keywords: thyroid neoplasms; remission, spontaneous; diagnosis.

¹Hospital Santa Casa de Misericórdia, Belo Horizonte, MG, Brasil

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Introduction

Papillary thyroid carcinoma (PTC) is the most common thyroid neoplasm. It represents 80-85% of all thyroid cancer cases and it has a good overall prognosis and low mortality rate^{1,2}. However, PTC can result in tumor recurrence and death, depending on the patient's characteristics, the tumor and the initial treatment approach³. Thus, the age equal to or greater than 50 years; tumors larger than 4 cm; extrathyroid spread; and association with certain histological subtypes of PTC, such as high cellular, solid and poorly differentiated varieties are related to a high mortality risk².

The initial diagnostic method in detecting PTC is fine-needle aspiration (FNAB). However, ultrasonography findings are also important to guide FNAB. Ultrasonography features include: a solid hypoechoic or isoechoic nodule with irregular or ill-defined margins, microcalcifications, taller-than-wide shape, and disorganized internal vasculature. Treatments include surgery, radioiodine as adjuvant therapy, and thyroid hormone treatment¹.

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In the absence of treatment, spontaneous cancer remission (disappearance of cancer) is considered an extremely exceptional event^{4,5}. Spontaneous remission of papillary thyroid carcinoma has been rarely reported in the literature^{4,5}. This report aims to present a case of spontaneous remission of primary papillary thyroid carcinoma. This paper was approved by the Research Ethics Committee of the Santa Casa de Misericórdia de Belo Horizonte/ Minas Gerais (CEP/ CONEP nº 066609/2021).

Case report

This is a 76-year-old male patient, brown, former alcoholic and former smoker with a history of ischemic stroke for twenty-two years and mild cognitive decline, with an increased uptake lesion in the left pterygoid fossa suggestive of neurinoma indicating surgical procedure by the service. Otorhinolaryngology, also refused by the patient in 2010, was diagnosed with thyroid papillary tumor in the same year. Thyroid ultrasonography performed in 2010 indicated a solid nodule in the distal third of the right lobe, isoechoic, perinodal vascularization, punctate calcification, measuring 10x7.3 mm. The cytological report obtained after the FNAB, also performed in 2010, showed papillary thyroid carcinoma in the right lobe, with indication for total thyroidectomy, a proposal which was not accepted by the patient.

Thyroid ultrasonography performed in march 2019 showed sonographic characteristics of an isoechoic nodule with a hypoechoic halo, partially defined, regular contours, located in the lower third of the right lobe measuring about 1.2x0.7 cm. The associated FNAB, in March 2019, indicated non-representative material for histopathological diagnosis. A new cervical ultrasonography was performed in August 2019, but without FNAB, showing a nodule in the lower third of the right lobe, predominantly hypoechoic, with regular contour, Chammas II, measuring 0.5x0.6x0.6cm, Ti-RADS 4. Finally, cervical Doppler ultrasonography performed on 12/01/2020 indicated the presence of a solid nodule in the lower third of the right lobe, hypoechoic, regular contours, Chammas II, absent calcification, Ti-RADS 4, measuring 0.7x0.6 cm. The cytological report obtained after the FNAB performed in 2020 pointed a benign pattern sample, in which we observed spontaneous tumor remission. The patient evolved with hypothyroidism (12/01/2020: Free T3: 1.75; Free T4: 0.89 and TSH: 5.33) and was referred to endocrinology.

Discussion

Spontaneous cancer regression is defined as the disappearance of the cancer in the absence of treatment. In patients with thyroid cancer with biochemically incomplete response to initial treatments, spontaneous regression of persistent or recurrent structural disease is unusual^{4,5}.

However, in thyroid carcinomas, overdiagnosis may occur. In this case, asymptomatic cancers are detected in tumors that are not growing or are growing slowly, but which would never have caused medical problems for the patient during the life. In this case, some of these tumors may spontaneously disappear without treatment⁶. Therefore, the active surveillance of tumor progression is very important before starting any treatment⁶.

Furthermore, the possibility of interpretive or sampling errors that result in false diagnoses must be considered. Inadequate or improper sampling is responsible for false negative errors. For example, nodules smaller than 1 cm may be too small to place the needle precisely, and nodules larger than 4 cm are too large to allow appropriate sampling for all areas, thus increasing the likelihood of misdiagnosis. In this sense, the pathologist must establish and observe criteria to exclude the diagnosis of malignancy⁷.

In this case report, we presented a case of a male patient, initially diagnosed with thyroid papillary tumor and indication for total thyroidectomy, which was refused by him. Ten years after the initial diagnosis, new FNAB pointed to a benign pattern sample, indicating spontaneous tumor remission. Although regressive histological changes have been recognized in many malignant tumors, it has been poorly documented in papillary thyroid carcinoma^{4,5}. It is believed that the non-appearance of metastases and histological changes over the years suggest tumor regression and the histological subtype of PTC may be the key prognostic factor for tumor regression and survival².

Ethical matters

This case report was approved by the Research Ethics Committee of the Santa Casa de Misericórdia de Belo Horizonte/ Minas Gerais (CEP/ CONEP nº 066609/2021).

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***Correspondence**

Gabriela De Martin Silva
Santa Casa de Misericórdia
Av. Francisco Sales, 1111, Santa
Efigênia
CEP: 30150-221, Belo Horizonte (MG),
Brasil
Tel.: +55 (31) 3238-8100
E-mail: gabrielamartin.gdms@gmail.
com

Authors information

GMS - B.Sc. in Medicine, Universidade
de Rio Verde/Goiás; Specializing in
Head and Neck Surgery. VAF, FSW,
JBOA and RLS: Otorhinolaryngologists
and Head and Neck Surgeons.

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