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## RELATO DE CASO

# NEOPLASIA FOLICULAR E CARCINOMA PAPILÍFERO EM UMA MESMA TIREOIDE: UM RELATO DE CASO

Follicular neoplasia and papillary carcinoma in the same thyroid: a case report

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## ACESSO LIVRE

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## RESUMO

**Introdução:** Neoplasias malignas da tireóide correspondem ao tipo mais comum de câncer endócrino. Dentre os diferentes subtipos histológicos, os mais comuns são os carcinomas papilares, seguidos dos carcinomas foliculares.

**Desenvolvimento:** A ocorrência de “tumores de colisão” na tireoide é rara, e a associação aumenta os riscos de metastatização linfática e hematogênica. A condução de “tumores de colisão” na tireoide é geralmente complexa e a literatura sobre esses casos é escassa, sendo usualmente guiada pelo subtipo mais agressivo. O tratamento cirúrgico com terapia adjuvante guiado pela histologia e pelo estado do paciente é a recomendação. **Considerações finais:** Relatamos o caso de uma paciente com queixa de nódulos tireoidianos palpáveis associado a pigarro recorrente há 1 mês, e que ao exame físico apresentava múltiplos nódulos em toda a topografia da tireoide, com aumento difuso da glândula. O estudo anatomopatológico evidenciou um “tumor de colisão” em tireoide, que se apresentou histologicamente como carcinoma folicular e papilar.

**Palavras-chave:** Doenças da glândula tireoide; Neoplasias de Cabeça e Pescoço; Tireoidectomia.

## ABSTRACT

**Introduction:** Malignant thyroid neoplasms are the most common type of endocrine cancer. Among the different histological subtypes, the most common are papillary carcinomas, followed by follicular carcinomas. **Development:** The occurrence of thyroid “collision tumors” is rare, and the association increases the risks of lymphatic and hematogenous metastatization. The conduction of “collision tumors” in the thyroid is generally complex and the literature on these cases is scarce and usually guided by the more aggressive subtype. Surgical treatment with adjuvant therapy guided by histology and patient status is the recommendation.

**Final considerations:** We report the case of a patient complaining of palpable thyroid nodules associated with recurrent throat clearing for 1 month, and on physical examination presented multiple nodules throughout the thyroid topography, with diffuse enlargement of the gland. The anatomopathological study showed a “collision tumor” in the thyroid, which presented histologically as follicular and papillary carcinoma.

**Key-words:** Thyroid Diseases; Head and Neck Neoplasms; Thyroidectomy.

## INTRODUCTION

The term "collision tumor" is used in the literature to refer to the existence of two or more tumors in the same topography, but histologically different, separated by normal tissue and with independent morphology. It is a well-defined situation in the literature, but of rare occurrence<sup>1,2</sup>. Even rarer is the occurrence of these tumors in the thyroid gland, most of which describe the simultaneous occurrence of medullary and papillary neoplasms<sup>3</sup>. The occurrence of follicular and papillary carcinomas in the same thyroid gland is rarely described in the literature due to its rarity<sup>2,4,5,6,7</sup>. For this reason, this case report aims to demonstrate a rare case of thyroid "collision tumor" presenting histologically as follicular and papillary carcinoma.

## CASE REPORT

A 69-year-old female patient presented to the Head and Neck Surgery department complaining of palpable thyroid nodules associated with recurrent throat clearing for 1 month. Physical examination showed multiple nodules throughout the thyroid topography, besides diffuse enlargement of the gland, no palpable lymph nodes. Normal thyroid function. Thyroid ultrasonography with enlarged gland showing one nodule in the right lobe and two nodules in the left lobe, one with calcification inside. Fine Needle Aspiration (FNA) from 2015 showing predominantly hemorrhagic material and fluid amorphous material consistent with colloid, in addition to some degenerate leukocytes, suggestive of Bethesda 2 colloid nodule.

Patient maintained follow-up at the service with a stable clinical condition, without further complaints. For control, in 2016, a new FNA was requested presenting as result with benign follicular nodule, including colloid nodule and adenomatous goiter, also Bethesda 2. In 2018, the patient reported abrupt worsening of hoarseness, evolving with dysphagic symptoms. Surgical intervention was chosen after tumor growth and malignancy aspects on new ultrasound. In the intraoperative period, the presence of an irregular nodule adhered to deep layers was observed, then it was choosed to perform a total thyroidectomy with freezing biopsy in the room. There were no lymph nodes on physical examination or imaging, and no neck dissection was performed.

Anatomopathological results: in right lobe, diagnosis of follicular malignant neoplasia, measuring 3.3 x 1.9 cm; in left lobe, papillary carcinoma, measuring 2.2 cm in its largest axis, with frequent psammoma bodies. After surgery, an Iodine-131 whole body scan was performed, presenting heterogeneous distribution of the tracer with focal areas of hyperconcentration in the anterior cervical region (thyroid store), with cervical uptake of 5.9%, in addition to the normal and physiological concentration of the tracer in projection of salivary glands, gastrointestinal tract and bladder. Staging the cancer as T4N0M0.

The patient underwent radioiodine therapy with Iodine-131. After initiation of suppressive therapy with levothyroxine 75mg. Clinically, she presents with hoarseness, without further signs or symptoms, resumed her routine activities. The last thyroid stimulating hormone (TSH) dosage was 3.90 $\mu$ UI / ml (RV: 0.38 to 5.33  $\mu$ UI / ml) and thyroglobulin 0.44ng / ml (VR: 1.59 to 50, 03ng / ml).

## DISCUSSION

Malignant thyroid neoplasms are the most common type of endocrine cancer. There are different subtypes including papillary, follicular, medullary, undifferentiated, anaplastic, lymphomas and metastases. Anaplastic variables and metastases have the worst prognosis. Of these, medullary carcinoma originates in calcitonin-secreting C cells, and papillary, follicular, undifferentiated and anaplastic carcinomas originate in thyroglobulin-secreting follicular cells<sup>6</sup>.

Papillary carcinomas correspond to the most common histological type of thyroid malignancies, accounting for 60 to 65% of cases<sup>3</sup>. Secondly, follicular carcinomas account for 15% of cases. Medullary carcinomas correspond to 5 to 10% of cases. The occurrence of "collision tumors" in the thyroid is rare, and when it occurs, it is more common to find a papillary-medullary relationship that corresponds to 1% of cases. Even rarer is the occurrence of follicular-papillary association<sup>6</sup>.

To date, there are no pathogenic mechanisms that could fully explain the neoplastic transformation of follicular cells into papillary and follicular histological types in the same gland<sup>8</sup>. Regarding follicular tumors, as follicular cells are the end result of the differentiation process, they may originate from a number of different cells, including thyroid stem cells and thyroblasts, while papillary carcinomas are almost always derived from thyroblasts. Taking this theory into consideration, follicular carcinomas may either arise from a primary papillary carcinoma, or both tumors may originate from a common stem cell<sup>6</sup>.

These subtypes are more prevalent in women 40 to 70 years<sup>2</sup>. The metastatization of both types is different, the papillary has a preference for the lymphatic pathway, and the follicular usually metastasizes by the hematogenous pathway. The association increases the risk of lymphatic and hematogenous metastatization and, although they are two types of well-differentiated tumors, their presence in the gland increases the risk of aggression and recurrence<sup>9</sup>.

The course of treatment of "collision tumors" in the thyroid is usually complex and the literature on these cases is scarce. Usually the treatment needs to be individualized, and it is suggested that it be guided by the most aggressive subtype. Surgical treatment with adjuvant therapy guided by histology and patient status is the recommendation<sup>4</sup>. In this case, surgery was the therapeutic choice, and neck dissection was not performed due to the absence of positive lymph nodes. Associated with this, the patient underwent adjuvant therapy with radioiodine therapy with Iodine-131. The case continues to be conducted with assessments of thyroglobulin levels and TSH dosage.

## CONCLUSÃO

O estudo epidemiológico permitiu identificar a evolução da incidência do câncer do colo do útero no estado do Tocantins, com maior acometimento de mulheres jovens. Além disso, foi possível realizar uma análise comparativa com a progressão da doença no Brasil, evidenciando uma curva crescente da morbidade tanto em âmbito regional quanto nacional. Dentre os principais fatores relacionados a esse crescimento destacam-se a sexarca precoce, desigualdades regionais no acesso à saúde da mulher e a persistência de subnotificações

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