



ORIGINAL ARTICLE

Analysis of pattern of occurrence of thyroid carcinoma between 2001 and 2010 ☆, ☆☆



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KEYWORDS

Papillary carcinoma;
Incidence;
Epidemiology;
Thyroid neoplasms;
Thyroid nodule

Abstract

Introduction: An ongoing discussion is found in medical literature about the reasons for changes in thyroid carcinoma incidence patterns over the last decades.

Objective: To analyze the clinical and pathological characteristics of thyroid carcinoma cases over a decade.

Methods: Cross-sectional study over an historical cohort. Medical records of 628 thyroid cancer cases in a single center were reviewed. 597 patients were included. Microcarcinoma cases were selected for a qualitative analysis phase, in which medical records were reviewed for better understanding of thyroid nodule and thyroid cancer diagnosis process.

Results: An increase in the proportion of cases with thyroid cancer diagnosis was observed throughout the decade; new cases were predominantly tumors of less than 2 cm, with histopathological signs of low aggressiveness. There was an increase in proportion of cases with malignant cytological results among microcarcinomas.

Conclusion: There is a trend for increase in thyroidectomies due to cancer in this institution, with proportional increment of cases with histopathological characteristics indicative of early disease. Among microcarcinomas, there is an increasing group represented by cancer cases that were not incidentally diagnosed, related to an enhancement in preoperative diagnostic methods.

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PALAVRAS-CHAVE

Carcinoma papilar;
 Incidência;
 Epidemiologia;
 Neoplasias da
 glândula tireoide;
 Nódulo da glândula
 tireoide

Análise do padrão de ocorrência do carcinoma de tireoide entre 2000–2010**Resumo**

Introdução: Persiste uma discussão na literatura sobre as razões para as mudanças no padrão de incidência do carcinoma de tireoide nas últimas décadas.

Objetivo: Analisar as características clinicopatológicas dos casos de carcinoma de tireoide ao longo de uma década.

Método: Estudo transversal sobre uma coorte histórica. Os registros médicos de 628 casos de câncer de tireoide de um único centro foram revisados. Foram incluídos 597 pacientes. Os casos de microcarcinoma foram selecionados para uma fase de análise qualitativa, na qual os registros médicos foram revisados para melhor entendimento do processo de diagnóstico do nódulo e do câncer.

Resultados: Observamos um aumento na proporção de casos com diagnóstico de câncer de tireoide ao longo da década; os novos casos foram predominantemente de tumores <2 cm, com sinais histopatológicos de baixa agressividade. Houve aumento na proporção de casos com resultado citológico maligno entre os microcarcinomas.

Conclusão: Há uma tendência de crescimento nas tireoidectomias por câncer na nossa instituição, com incremento proporcional de casos com características histopatológicas indicativas de doença precoce. Entre os microcarcinomas, há um grupo em ascensão representado por casos com diagnóstico não-ocasional de câncer, relacionados à melhora dos métodos diagnósticos pré-operatórios.

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Introduction

By far, thyroid carcinoma is the most common type of endocrine cancer.^{1,2} Papillary carcinoma (PC) is the most common subtype of thyroid carcinoma. Although malignant neoplasms of the thyroid correspond to only 1% of all cancers and to 0.5% of all deaths caused by cancer in the world,^{3,4} autopsy studies have shown that PC is extremely common and underdiagnosed. One of the best-conducted studies from a methodological point of view was that by Harack et al. In their paper, these authors analyzed 101 glands sectioned at 2–3 mm intervals. Neoplastic foci were found in 36% of cases, all in individuals with no prior knowledge of thyroid pathology. In most cases the tumors were represented by small microcarcinomas, and many others may have been lost, solely due to the predetermined interval section.⁵

Although thyroid PC is a disease of low mortality,^{6,7} it still remains a cause of concern. The growing incidence of a disease with a high cure rate increased its prevalence rates, resulting in significant financial impact on society.⁸ An epidemiological review among US individuals revealed that the incidence of thyroid cancer has increased more than twice in the last 30 years, making it the tumor with most pronounced increase in incidence between the years 1992 and 2002.⁹

Most studies have attributed this increased incidence to the greater use and better quality of diagnostic tools, which could lead to an increase of incidental diagnoses of previously hidden carcinomas.¹⁰ Other studies have produced results opposed to this hypothesis, as they also showed an increase in the incidence of tumors larger than 1 cm, leading their authors to believe that this increased incidence may also be occurring among tumors that were not diagnosed

occasionally.¹¹ These results are based on inferences from data from preoperative cytological studies and from tumor diameters. Although to date there is no strong evidence of a global and uniform increase in exposure to risk factors historically known for this disease, it still remains uncertain whether the increase of new cases of thyroid cancer reflects a higher risk of developing this neoplasia, or whether this is only an artificial result related to diagnostic procedures.

A great number of international studies are based on regional or national statistics. Only a few institutional papers studied features associated with the diagnosis process, and none of them with a qualitative approach. The authors' aim was to analyze the pattern of occurrence of thyroid cancer over a decade, in a quantitative and qualitative documentary study based on an institutional historical series, with a detailed description of clinical, epidemiological, and histopathological data, and with information regarding the diagnostic process for nodules and cancers.

Methods**Patients**

After approval by the Institutional Review Board (Project No. 3483/11), a documentary study with quantitative and qualitative phases was developed. In the quantitative phase of this work, a cross-sectional study was designed involving all patients who underwent thyroidectomy in this institution, with a final diagnosis of cancer, between January of 2001 and December of 2010. The patients were treated by one of the surgeons of the clinical staff of this hospital, mostly members of the head and neck surgery team.

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