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## LETTER TO THE EDITOR

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# Thyroid Cancer with Skull Enlargement: A Lesson Learned?

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### Abstract

A case of endemic goitre associated with thyroid cancer and huge enlargement of the scalp is reported in a Brazilian mulatto from an iodine deficient Central west region of the country. On admission, osteolytic metastases of follicular thyroid carcinoma were found scattered in the parietal bones. Impressive images from old files could illustrate and emphasize the hurdle-like role of poverty and inadequate social and cultural attitudes before the fight against cancer in regions with limited resources. Even in developed countries, goitres still occur in areas with iodine prophylaxis. Another concern is insufficiency of reliable data on the incidence and pattern of head and neck tumours in developing countries.

**Key Words:** Calvarium metastases - endemic goitre - follicular thyroid cancer - head and neck tumour

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### Introduction

Unfortunately, the gap between the rich and the poor nations is constantly widening; moreover, the incidence and the death rate from cancer are rising in developing countries, where about 80% of the patients show a late stage condition when the initial diagnosis is established (Pal and Mittal 2004).

Huge tumours of the scalp constitute a rare finding (Richardson et al 2004), and often represent malignant conditions (Stark et al 2003, Kumaret al 2005). The patient was an illiterate rural worker, living in poor socioeconomic conditions in an iodine deficient region, without access to scientific progress and health education (Aydemir et al 2003). Consequently, a far advanced follicular thyroid cancer with multiple osteolytic expansible lesions was detected at his first hospital admission.

The authors emphasize the need of accessible primary health care and better education, in addition to more reliable statistical data about head and neck tumours in developing countries (Amusa et al 2004). A major concern is the devastating consequences of poverty and ignorance, with detrimental effects on cancers that are curable if detected early and treated appropriately (Pal and Mittal 2004).

### Case Report

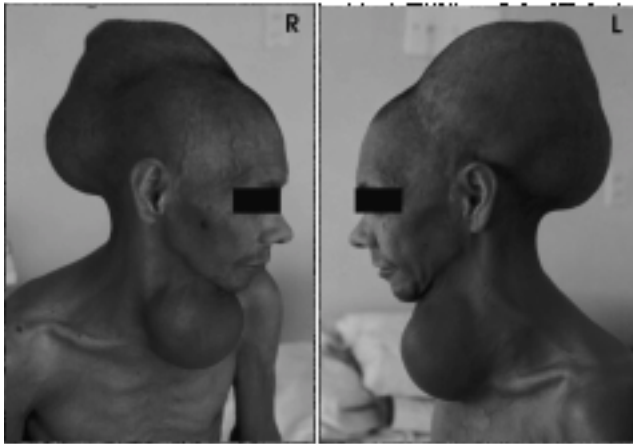
A 55-year-old Brazilian man was admitted with a mass

in the skull, tiredness, anorexia and weight loss. This illiterate rural worker had lived in poor socioeconomic conditions in an iodine deficient region. Since his youth, there was a progressive increasing of thyroid, not properly followed. During the last two years, he observed an enlargement on his head, with headaches relieved by common analgesics. Noteworthy, he had never searched for hospital attention before this admission. There was no family history of cancer. He denied tobacco or alcohol consumption. Physical examination showed normal vital signs, pale mucus membranes, body mass index 15.4kg/m<sup>2</sup>, triceps skin fold 2.4mm, and mid arm muscle circumference 12.3cm. There was a solid anterior neck mass without palpable nodes, and a huge non tender enlargement extending beyond the calvarium limits (Figure 1). The neck and head veins appeared dilated. The remainder of physical examination was unremarkable. The hematocrit was 35% and mean corpuscular volume 99fl. Electrolytes, albumin, liver and renal functions, and urinalysis were within the normal ranges. Thyroid tests showed low FT<sub>4</sub> and high TSH. Calcification was not detected in the thyroid gland. Multiple osteolytic expansible lesions were observed in parietal bones.

### Discussion

The patient presented an endemic goitre and a mass on the cranial vault due to far advanced follicular thyroid cancer, implying the worst prognosis (Stark et al 2003). Destructive

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**Figure 1. Right (R) and Left (L) Lateral aspects of Adenomatous Goitre Associated with Thyroid Carcinoma and a Huge Irregular Enlargement that Extends Beyond the Calvarium Limits.**

expandable lesions were found involving the cortical tables of parietal bones, producing the huge scalp protuberance without compromise of the adjacent brain parenchyma. Despite the extensive bone destruction, he showed no neurological sign, because of an exclusive extra cranial development of the mass. Although other primary tumours may involve the calvarium, metastases and multiple myeloma are the most common malignant tumours in adults; and lytic expansible metastases are typically associated with renal and thyroid carcinomas (Richardson et al 2004). Papillary and follicular thyroid carcinomas are relatively frequent tumours, and the papillary type has been the most common. However, in areas of endemic iodine deficiency the frequency of follicular type increases (Larijani B et al 2004), with near parity in sexes, more frequent distant metastases and significantly higher mortality (Sarda et al 2002, Sarda AK and Kapur MM 2005). Differing from our case, patients with skull metastases are usually older, and asymptomatic or with a shorter history of symptoms (Amusa et al 2004).

Socioeconomic and environmental factors can be also accountable for high incidence, far advanced stage, and worst prognosis (Aydemir et al 2003, Pal and Mittal 2004) of thyroid cancer in patients from iodine deficient regions, mainly in developing countries (Bakiri et al 1998, Lin et al 1999, Passler et al 2004).

The authors believe that the strong visual impact of pictures like those presented here could contribute to awaken the ethical consciousness of physicians and opinion makers from developing and wealthy countries.

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