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Clinical Case

Parathyroid Carcinoma on the Subject of a Case

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Abstract

Parathyroid carcinoma is a rare disease. It usually presents as hyperparathyroidism, accompanied by clinical and biochemical data that suggest it.

It has a little active evolution, although tenacious, since the tumor has a rather low malignant potential. At their initial presentation, very few patients with parathyroid carcinoma have metastasized to either the regional lymph nodes (<5%) or distant sites (<2%).

A case of a 47-year-old woman with history of repeated kidney stones, with a previous diagnosis of hyperparathyroidism. In addition, she had a palpable cervical mass. Surgical treatment and pathological study were performed with the result of Parathyroid Carcinoma.

Keywords: Parathyroid Carcinoma; Surgical Treatment; Hyperparathyroidism

Introduction

Parathyroid cancer is one of the least common human cancers: its incidence is estimated at 0.015 per 100,000 population, and its prevalence in the United States is estimated at 0.005%. In Europe, the United States and Japan, parathyroid carcinoma causes hyperparathyroidism (HPT) in about 0.017 to 5.2% of cases; however, each of the series of cases are reported indicate that this entity is responsible for less than 1% of patients of primary HPT. The average age of the most series is located between 45 and 51 years. The ratio of affected women to men is 1: 1 in contrast to primary HPT for which there is a significant female predominance (3–4: 1 ratio).

Parathyroid cancers are hyperfunctional, unlike of other endocrine tumors that decrease their hormonal activity when malignant. The clinical features of parathyroid carcinoma result mainly from the effects of excessive secretion of the tumor by parathyroid hormone, also called parathormone (HPT) rather than by infiltration of tumor cells in vital organs. Serum HPT levels may be 3 to 10 times higher than the normal upper limit; this elevation is rare in primary hyperthyroidism, which usually has serum HPT levels less than twice normal. Therefore, signs and symptoms of hypercalcemia often dominate the clinical picture and may include typical hyperparathyroid bone disease, and features of renal complication

such as nephrolithiasis or nephrocalcinosis. A common complaint of parathyroid carcinomapatients is renal colic.

From an operational point of view, parathyroid cancer can be distinguished from adenomas by its firm and stony consistency, and its lobed pattern; Adenomas tend to be soft, round or oval, and reddish brown in color. In most series, the median maximum diameter of parathyroid carcinoma is 3.0 to 3.5 cm, compared to approximately 1.5 cm from benign adenomas. In about 50% of patients, the malignant tumor is surrounded by a dense, grayish-white fibrous capsule that infiltrates adjacent tissues.

Clinical Case

It describes a case of a 47-year-old female patient with a history of recurrent kidney colic, recurrent kidney stone despite the medical and surgical treatment received, recently added an alteration in kidney function. On physical examination, the patient is stable, presenting a palpable, non-painful, 3 x 2 cm formation on palpation in the anterior and inferior neck region, left side. She attended the consultation with complementary studies.

Laboratory

Image: Laboratory results, high PTH values, total calcaema and glomerular filtration.

Parathormone-PTH	190,90 pg/ml	Creatinine Clearance:	
Calcemia Total Calcinuria ionic calcium	11,49 mg/dl 291 mg/24hs 1,45mmol/l	Creatinemia Creatininuria Glomerular filtration clearance	0,67 mg/dl 0,68g/24hs 71,1ml/min
Phosphatemia	2,49 mg/dl	Diuresis	1200ml/24hs
Phosphaturia Alkaline Phosphatase	0.63g/24hs 91 U/l		

Parathyroid scintigraphy

In this study, a focal accumulator of the tracer in projection of the lower left parathyroid was identified, suggesting as a differential diagnosis hyperfunctioning adenoma.

It offers surgical treatment of this mass and evaluation and extraction of contralateral parathyroid, prepared with all presurgical and after calls to surgery renal function evaluation thereof during surgery by the anesthetist.

It practiced cervicectomy, resection of the left parathyroid tumor, which was well delimited from the thyroid gland and the right lower parathyroid gland, which was also enlarged, in addition to cervical adenopathy that were at level V.

The study by pathological anatomy reports left parathyroid with histological pattern of parathyroid cancer. Lymph node with focus suggestive of cancer metastasis.

The patient evolved favorably with calcaema control exams, normalizing values that were elevated before surgery.

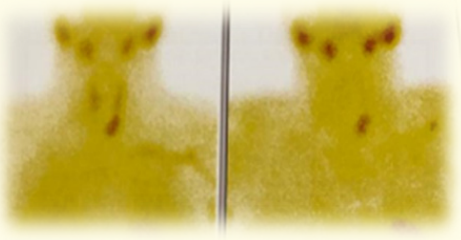

Figure 1: Scintigraphy Parathyroid.

Discussion

Parathyroid carcinoma is not a frequent diagnosis, so it is not the most common cause of hyperparathyroidism in our medical practice.

Its etiology is unknown; however, an increased risk of developing parathyroid cancer was related to multiple endocrine neoplasia and isolated familial hyperparathyroidism with an autosomal dominant inheritance pattern, it was also related to exposure to

external radiation and there are cases reports in patients with a history of chronic kidney disease and hemodialysis.

Some patients undergo procedures to treat a more common cause such as parathyroid adenoma. Only after examining postsurgical pathology or when these patients have local or distant recurrence, is a correct diagnosis of parathyroid carcinoma made.

The effective treatment for parathyroid carcinoma is surgery. Initial surgery includes a block resection of the tumor with all regions of possible invasion at that time. At their initial presentation, very few patients with parathyroid carcinoma have metastasized to either the regional lymph nodes (<5%) or distant sites (<2%).

With non-surgical forms of therapy for carcinoma of the Parathyroids generally do not produce good results.

Patients with this disease should be monitored for life because they may be at a relatively high risk of relapse, for prolonged periods of time. In an analysis of scientific publications, evidence of 8% general recurrence after a block resection was indicated with evidence, versus 51% incidence after standard parathyroidectomy. Cervical lymph node dissection should only be performed on enlarged or firm nodules, especially those found in level VI paratracheal nodes and level III and IV internal jugular nodes. Localization studies performed before the first operation or a new operation may include scanning with technetium Tc 99m and sestamibi, single-photon emission computed tomography, MIBI-CT image fusion, ultrasound, computed tomography (CT), selective angiogram and selective venous sampling of HPT; CT and magnetic resonance imaging are also useful imaging aids in locating distant metastases [1-13].

Conclusion

Consider this disease as a rare but possible diagnosis, in relation to a patient with hyperparathyroidism, relating her pathological history, her clinical and biochemical presentation, allows us to suspect and opt for an adequate treatment, and thus obtain good results on time, while the low frequency of this in world reports makes your report of interest and discussion, as well as its dissemination and reporting.

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