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Clinical Practice

Hyperparathyroidism: diagnosis in primary care

Hiper-paratiroidiosmo: diagnóstico en atención primaria

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Hyperparathyroidism is an ancient disease which can be traced back to the Neolithic period, skeletons from 7,000 years ago have been studied; in which pathognomonic findings of hyperparathyroidism have been found.[1] But, until 1915, Friedrich Schlaugenhausfer was the first person to relate diseases of the parathyroid gland with bone diseases.[1]

The term primary hyperparathyroidism (P-HPT) refers to an inappropriate or irregular overproduction of parathyroid hormone (PTH), which generates an abnormal absorption of calcium; the more PTH, the greater the reabsorption of calcium at the renal level, at the same time that it generates phosphaturia[2].

Throughout history, patients with P-HPT have presented with specific symptoms such as: urolithiasis, bone pain, fractures, and non-specific symptoms such as: depression, lethargy, as well as vague aches and pains. But today, many of the patients are asymptomatic and diagnosed are incidentally in their routine laboratories[3].

We present a case detected in consultation where the 64-year-old female patient attended her annual prevention consultation, without important personal history and who referred asymptomatic at the time of consultation. The results of relevance that she brought were Calcium in serum of 12.87 mg/dl and Phosphorus in serum of 2.69 mg/dl; no alterations were found on physical examination.

The case was followed up with the patient, due to suspicion of P-HPT. The test results were:

-Analysis: PTH: 294.6 pg/ml, Calcium in serum: 12.59 mg/dl, Phosphorus in serum: 2.49 mg/dl. Rest without alterations of importance.

-Imaging tests: (fig. 1).

-Lumbar densitometry: in the spine there is a decrease in bone density of 21% compared to the young population of the same sex. Densitometric diagnosis according to the WHO of osteopenia in the spine.

-Neck ultrasound: thyroid gland within normal limits with data suggestive of cystic lesion of the right parathyroid gland.

-Parathyroid PET-SCAN: hypercaptant nodular image in the upper pole of the right thyroid lobe and less intense in the lower pole of the same lobe, in relation to hyperfunctioning parathyroid glands.

With these data, the diagnosis of P-HPT was reached. Subsequently giving surgical treatment with removal of the upper right parathyroid and the following pathology report: parathyroid gland of 4 gr, adenocarcinoma of 4.5 cm of major axis. Fragments of the parathyroid gland with benign neoplasm characterized by an increase in oxyphilic cells with moderate eosinophilic granular cytoplasm, ovoid nuclei with a regular contour and small nucleoli, surrounded by a thin fibrous capsule and the presence of of thick-walled vessels.

Many patients have no symptoms until blood calcium exceeds 12 mg/dl, but when calcium levels are greater than 14 mg/dl patients have symptoms, depending on the degree of evolution[4].

The diagnosis of the disease is made with the help of laboratories, but they use the help of cabinet tests to be able to plan the surgical intervention[5].

Treatment for these patients must be personalized for each case. It is recommended to give the adult patient a dose of 1,000 to 1,200 mg of calcium before undergoing surgery[6]. Dietary restriction is not necessary nor is it indicated to give vitamin D[6]. After surgery, calcium and/or vitamin D supplementation should be administered as prophylaxis against hypocalcaemia. The goal of parathyroidectomy is to cure the patient. Between 95% and 99% of patients diagnosed with P-HPT reestablish calcium homeostasis at least 6 months after surgery[6].

In conclusion, in our patient the first manifestation was an asymptomatic increase in plasma calcium. For this reason, it is always important to dedicate adequate attention to all patients, as well as their respective follow-up and in this way be able to prevent complications or sequelae.

Conflict of interest

The author has no relevant financial interest, ethical considerations or conflict of interest in the products or companies described in this article.

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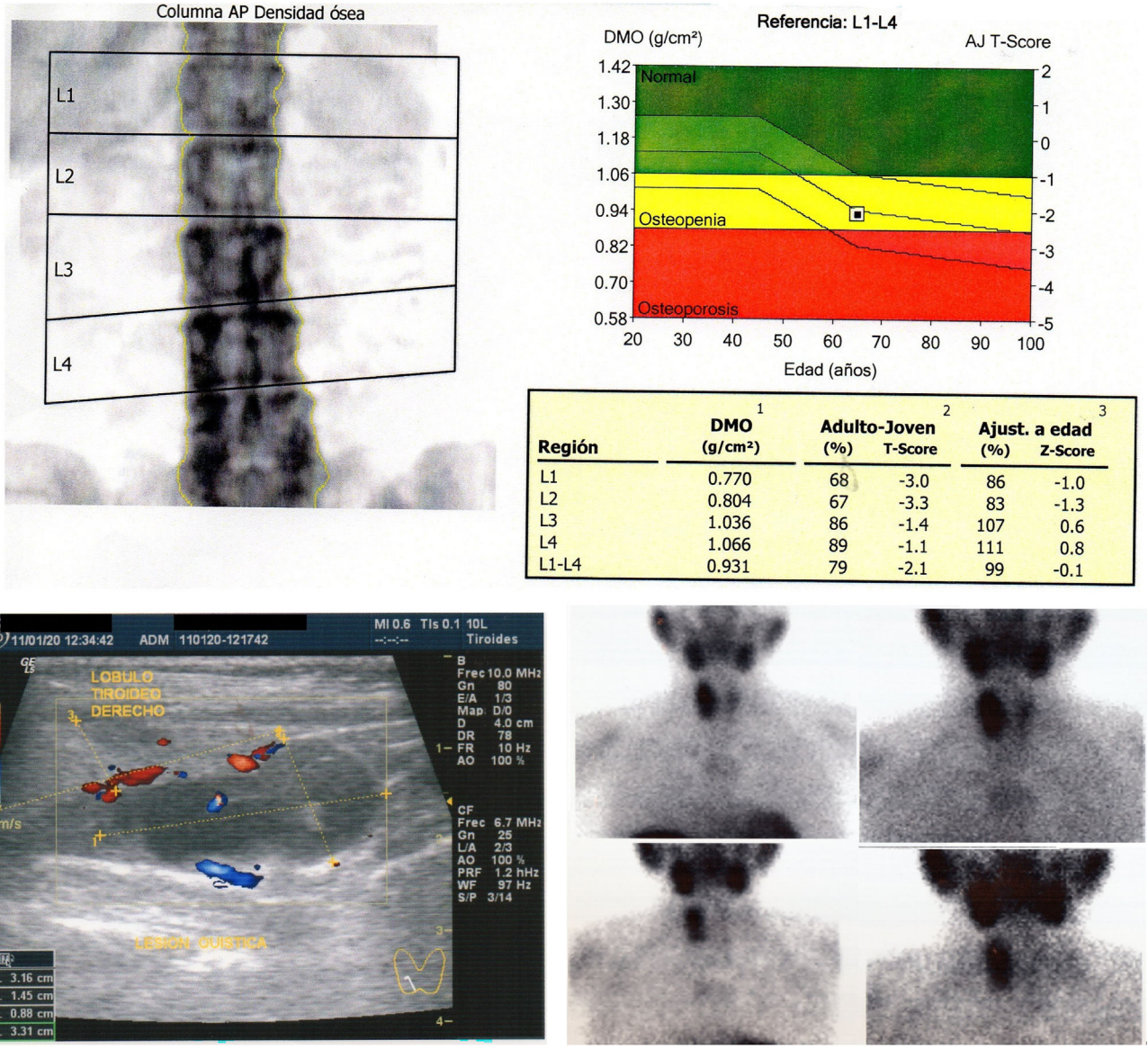

Fig. 1. Radiological findings: densitometry with the presence of osteopenia in the spine. Neck ultrasound with suggested data of cystic lesion of the parathyroid glands. Parathyroid scintigraphy with hypercaptant nodular image in the upper pole of the right thyroid lobe and of less intensity in the lower pole of the same side.

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