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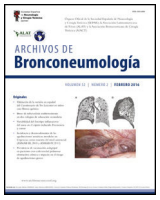

Case Report

Unilateral Phrenic Nerve Palsy in a Patient With a Giant Intrathoracic Goiter

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A 75-year-old male patient with a history of subclinical hyperthyroidism and pretoxic nodular goiter was seen by Pneumology Department for a 6-month history of grade 1–2 dyspnea grade 1–2 mMRC that he had not presented previously, as well as cough, whitish expectoration and orthopnoea. A new chest X-ray was requested, showing a mediastinal widening possibly due to endothoracic goiter that caused a tracheal deviation to the right, which was already found in 2018 (Fig. 1A) and that could have increased in size and highlighted an elevation of the right hemidiaphragm (Fig. 1B) not visible in previous controls. A CT scan of the neck and chest was requested, it showed a large diffuse thyroid goiter with a large endothoracic component (Fig. 1C, D) extending to below the aortic arch of the left thyroid lobe (7 cm in anteroposterior diameter, 7.1 cm transverse diameter and 11 cm craniocaudal diameter), with compression of the trachea leading to tracheal stenosis with a transverse diameter of 8 mm and anteroposterior diameter of 15 mm, elevation of the right hemidiaphragm and bronchiectasis in the middle lobe and some bronchiectasis in both lower lobes. Endocrinology was contacted and after requesting a new hormonal study, no changes were observed with respect to the previous studies. The case was presented to the Endocrinology and Thoracic Tumour Committees. The patient underwent surgery for this pathology. The sample was sent to Anatomical Pathology with the following result: nodular, multinodular, predominantly colloid hyperplasia.

Intrathoracic goiter is a pathology that is usually related to the presence of a multinodular goiter and is more frequent in areas with iodine deficiency. The most frequent symptoms are secondary to compression of other structures such as dyspnea (up to 50% of patients), stridor or dysphagia (13%)[1] which can sometimes lead to life-threatening situations.[2] The phrenic nerve is the only nerve innervating the diaphragm. Compression of the phrenic nerve appears to be unusual manifestation of an retroestrenal goiter[1] and iatrogenic injury of this nerve occurs relative more frequently than compression due to large goiter.[3] Our case shows a goiter with compression of practically all mediastinal structures and a clinical picture probably secondary to involvement of the trachea and diaphragm. There are few cases of this type of presentation reported in the literatures.[3–5]

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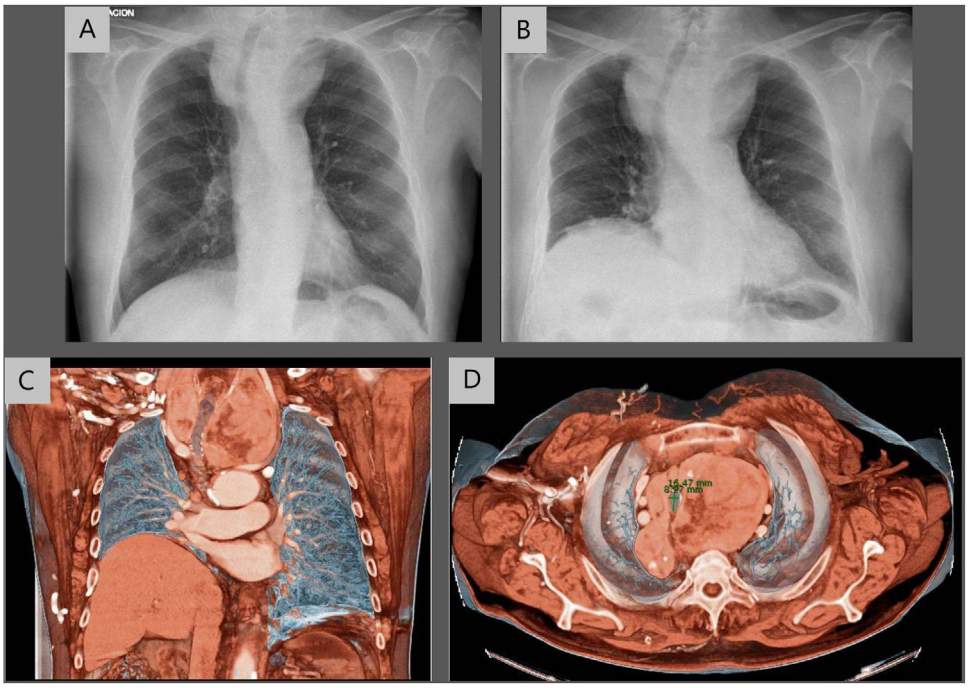

Fig. 1. The chest X-ray taken in the Pneumology consultation (B) shows an increase in the widening of the middle mediastinum together with a tracheal deviation and an elevation of the right hemidiaphragm not present in the 2018 image (A). Coronal (C) and axial (D) reconstruction of the chest CT slices shows a large intrathoracic goiter with diaphragmatic elevation, compression of the aorta and decreased tracheal lumen.

Conflict of interests

The authors state that they have no conflict of interests.

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