Granular Cell Tumours: An Uncommon Endobronchial Neoplasm

Tumor de células granulares: una neoplasia endobronquial poco frecuente

To the Editor:

Granular cell tumors (GCT), previously called myoblastomas and now called schwannomas, are very infrequent tumors, classified as benign lung tumors.[1] Since Feckner communicated the first case with endobronquial location in 1938, less than one hundred cases have been published in the international literature. Its topographic distribution is widespread, and the endobronquial location constitutes 6% of these tumors,[2] as in the case that we describe.

The patient is a 51-year-old male, ex-smoker of 35 packs/year with no history of interest, who came to our consultation due to hemoptysis evolving over the previous two months. Chest radiography and computed tomography (CT) showed no alterations. Likewise, bronchoscopy was performed, revealing mucosa with an infiltrative appearance on the segmental carina of the anterior and apical bronchi of the RUL (fig. 1), which was biopsied. The anatomical pathology (AP) study reported GCT, presenting intense immunohistochemistry (IHC) expression for vimentin and S-100 protein. The functional study demonstrated: FEV_1 57%, FVC 72% and KCO 84%, with FEV_1 PPO 25%. In September 2009 right upper lobectomy was performed with hilar-mediastinal lymphadenectomy by means of thoracotomy, with AP study compatible for malignancy. Despite this, pneumonectomy was not carried out given the respiratory function of the patient. The anatomical pathology examination of the piece demonstrated the existence of a GCT in a submucosal location that was in contact with the bronchial resection margin. The margins of vascular resection, as well as the paratracheal, subcarinal and hilar lymph nodes showed no evidence of cells with neoplastic morphology. One year after the intervention, the patient is stable, showing no signs of relapse on either radiographic or bronchoscopic explorations.

GCT occur most frequently between the ages of 20 and 57, affecting both sexes equally.[1,3] The main symptoms that accompany endobronchial GCT are cough, recurring infections, fever, dyspnea and hemoptysis (as in our patient) in up to 16% of cases.[3] The radiological techniques can be of help in the differential diagnosis with other pathologies, although most cases do not present pathological findings. Half of lung GCT are incidental findings during bronchoscopy, which is usually performed for reasons of obstruction, among these atelectasis and secondary pneumonia.[3,4] They are made up of polygonal and fusiform cells, with granular cytoplasm, eosinophilic; with an IHC with expression of antigens for s-100 protein, vimentin and neuron-specific enolase.

We have only found in the literature one case of GCT with data for malignancy,[5] and associated with other tumors in 13% of cases. The treatment of this type of tumors generates great controversy; some authors recommend endoscopic resection (with or without the use of laser) for those lesions less than 8 mm in diameter, although there seems to be a high associated rate of relapse after resection.[1,6] Although select cases could be observed with follow-up imaging and bronchoscopic techniques,[1,4] complete surgical resection of the tumor continues to be the treatment of choice in these patients.[4] The prognosis of these patients is favorable, and there are published reports of survivals of more than 5 years after surgery.[1]

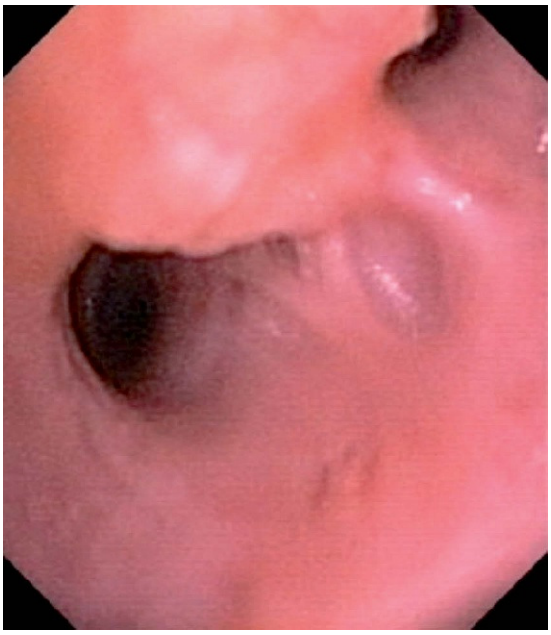

Figure 1. Endoscopic image showing edematous and thickened mucus, corresponding with GCT.

In conclusion, GCT is a rare tumor pathology that can become manifest with obstructive symptoms of the tracheobronchial tree. Bronchoscopy plays a fundamental role in the management of these patients, both in the differential diagnosis with other pathologies located endobronchially as well as in the continued observation of relapses. The treatment of choice is surgical resection of the tumor and the prognosis is favorable.

References

1. Alberg AJ, Forg JG, Samet JM. Epidemiology of lung cancer. Chest. 2007;132:S29-55.
2. Yeh KY, Chang J WC, Hsueh S, Chang TG, Lin MC. Ovarian metastasis originating from bronchioloalveolar carcinoma: a rare presentation of lung cancer. Jpn J Clin Oncol. 2003;33:404-7.
3. Fujiwara K, Ohishi Y, Koike H, Sawada S, Moriya T, Kohno I. Clinical implications of metastases to the ovary. Gynecol Oncol. 1995;59:124-8.
4. Young RH, Scully RE. Ovarian metastases from cancer of the lung: problems in interpretation – A report of seven cases. Gynecol Oncol. 1985;21:337-50.
5. Mazur MT, Hsueh S, Gersell DJ. Metastases to the female genital tract. Analysis of 325 cases. Cancer. 1984;53:1978-84.
6. Spector M, Pollak JS. Management of malignant pleural effusions. Semin Respir Crit Care Med. 2008;29:405-13.

John Christian Durán Toconás,* Gerardo Andrés Obeso Carillo, Miguel Ángel Cañizares Carretero

Servicio de Cirugía Torácica, Complexo Hospitalario Universitario de Vigo, Pontevedra, Spain

*Corresponding author.
E-mail address: chris duranx@yahoo.com (J.C. Durán Toconás).