ABSTRACT

Purpose/methods: To report a rare case of a tumor in a conjunctival location, a giant cell collagenoma. Tissue was stained with hematoxylin-eosin, periodic acid-Schiff, and Masson’s trichromic stain and studied by immunohistochemistry.

Results/conclusion: The clinical and histopathological features of conjunctival giant cell collagenoma are similar to characteristics of the same tumor occurring in other parts of the body. This is the first report of this tumor in the eye (Arch Soc Esp Oftalmol 2007; 82: 233-236).

Key words: Conjunctiva, collagenoma, giant cell, immunohistochemistry.

RESUMEN

Objetivo/método: Se presenta un raro tumor con ubicación conjuntival, un colagenoma de células gigantes. Se exponen las características histopatológicas utilizando Hematoxilina y Eosina, PAS, Tricrómico de Masson e inmunohistoquímica.

Resultados/conclusiones: Se presentan las características clínicas e histopatológicas del colagenoma de células gigantes de conjuntiva, que son similares a las características de éste tumor en otras partes del cuerpo. Este es el primer reporte de este tumor en el ojo.

Palabras claves: Conjuntiva, colagenoma, células gigantes, inmunohistoquímica.

INTRODUCTION

In 1998, a new fibroblastic tumor in soft areas frequently located in lower limbs was called giant cell collagenoma by Rudolph (1). Said tumor is characterized by comprising two components:

1. Hyalinized collagen matrix with storiform pattern.
2. Presence of giant cells.

This paper presents a case of this pathology located in the bulbar conjunctiva.

CASE REPORT

A 48 year-old male visited the practice due to a tumoral lesion in the right eye (RE) with a 1-year evolution. The lesion was painless and had exhibited a slow growth.

The ophthalmological assessment revealed a visual acuity of 1 in both eyes (BE) and the biomicroscopic examination showed a whitish raised lesion with multinodulated surface, mobile, hard, located at the conjunctival-limbar level between 6
and 7 of the clock in the RE. The lesion was accompanied by a moderate perilesional conjunctival injection. The LE did not exhibit pathological alterations. The assessment of the posterior segment was normal in BE. Intraocular pressure (IOP) was of 12 mmHg in the RE and 14 mmHg in the LE, without evidence of lymphadenopathies.

The lesion was resected locally without complications for subsequently biopsy. Macroscopically it was a circumscribed but not encapsulated lesion with a firm but elastic consistency with regular whitish surface, without evidence of necrosis, hemorrhage or calcification. Said lesion measured 0.9 x 0.5 x 0.2 mm. The sample was immersed in formol buffer 10% for histological examination, subsequent inclusion in paraffin and coloring with Hematoxiline and Eosin, PAS and Masson trichromic. These studies revealed that the tumor consisted in a prominent hypocellular matrix comprising hyalinized collagen strips which adopted a storiform pattern. The strips exhibited numerous giant multinuclear cells with clear cytoplasm, without pleomorphism or nuclear Hyperchromatism or evidence of mycotic figures. In addition, star-shaped cells were observed together with said giant cells, having an analogous nuclear morphology and distributed in isolated manner in the strioma. No necrosis areas, fibromixoid changes or calcifications were observed.

Subsequently, the immunohistochemical (IHQ) studies were carried out using monoclonal cells in
bovine serum at 1%. The following antibodies were utilized: vimentine (BioGenex), cytokeratine (BioGenex), desmine (BioGenex), protein S-100 (BioGenex), CD34 (BioGenex) and CD68 (Dako). The lesion was diffusely positive for vimentine and only the giant cells were positive for CD68 but negative for cytokeratine, desmine, protein S-100 and CD34.

The diagnostic was giant cell collagenoma in bulbar conjunctiva.

**DISCUSSION**

Giant cell collagenoma is an infrequent soft tissue tumor. It is believed it could originate in fibroblastic cells. Rudolph (1) described this neoplasia within the fibroblastic soft tissue tumors, where the predominant morphological pattern is an intense deposit of hyalinized collagen matrix with a storiform pattern and the presence of giant cells. The latter criterion is not present in all of said tumors, and for this reason the nomenclature describes them as desmoplastic fibroblastoma, collagenome fibroma, giant cell fibroblastoma, etc.

Cases of collagenous fibroma have been reported (desmoplastic fibroblastoma) (2,3) in different parts of the body, with the limbs being the area most frequently affected. Other areas include the neck, shoulder, parotide glands and feet. All patients exhibited a slow growing painless mass. The tumor occurs with the same frequency in both men and women.

Circumscribed storiform collagenoma was first mentioned by Weary et al (4) 31 years ago in the context of Cowden’s disease and was considered as one of the main diagnostic criteria for the multiple hamartoma syndrome. Rapini and Golitz subsequently reported a sporadic form with analogous shape, for which reason Metcalf (5).

Proposed describing it individually, designating it as circumscribed storiform collagenoma.

All the above mentioned tumors could belong to a group characterized by a collagenous matrix.

The morphology, the structural characteristics of the matrix with abundant collagen deposits and the presence of bizarre cells proves the striking similarity of the herein reported lesion with the tumor defined by Rudolph as «giant cell collagenoma».

The differential histological diagnostic includes several fibrous proliferations with multinucleated cells such as the pleomorphic fibroma, variants of dermofibroma, atypical fibroxanotoma, giant cell fibroblastoma, nevus of Spitz, pleomorphic lipoma, reticulohistiocitoma, variants of xantomas or xantogranulomas and histiocytical inflammatory lesions such as foreign body reactions with keloid scar formation.

One point to be taken into account when the tumor is located in the eye is that the ophthalmological characteristics of the lesion, having a whitish nodulated appearance, hard to the touch and firmly adhered to surrounding tissues, can be interpreted as a neoplasia with malign behavior and lead to therapeutic errors.

In spite of the bizarre behavior of the giant cells, the absence of mitosis and the clinical evolution would confirm the benign nature of this neoplastic entity.

In summary, a conjunctiva giant cell collagenoma is presented. Additional papers describing a larger number of these tumors will allow for a better knowledge of this type of lesion.

**REFERENCES**