IRIDOSCHISIS ASSOCIATED TO CONGENITAL SYPHILIS: SEROLOGICAL CONFIRMATION AT THE 80'S

IRIDOSQUISIS ASOCIADA A SÍFILIS CONGÉNITA: CONFIRMACIÓN SEROLÓGICA A LOS 80

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ABSTRACT

Clinical case: Female in her eighties is admitted suffering from unilateral ocular pain. On examination we observed, as well as corneal abrasion, a bilateral iridoschisis with a frayed iris, unfolded between its stromal layers.

Discussion: This rare case is related either to senile degenerative change or to angle-closure glaucoma. However, it is also associated with congenital syphilis with or without the presence of interstitial keratitis. Infant conjunctivitis and a «salt and pepper» appearance of the fundus oculi complete the diagnosis. It is confirmed that the patient had suffered from congenital late syphilis, cured by the age of 80: this confirmation is reached by treponemal (RPR-) and non-treponemal (TPHA+) serological tests (Arch Soc Esp Oftalmol 2009; 84: 353-358).

Key words: Bilateral iridoschisis, angle-closure glaucoma, congenital syphilis, interstitial keratitis.

RESUMEN

Caso clínico: Mujer octogenaria que acude por dolor ocular unilateral. En la exploración observamos, además de una abrasión corneal, una iridosquisis bilateral con un iris desflecado, desdoblado entre sus capas estromales.

Discusión: Esta rara entidad está relacionada con los cambios degenerativos seniles o al glaucoma de ángulo cerrado. Sin embargo, también es asociado a la sífilis congénita con o sin la coexistencia de queratitis intersticial. Las conjuntivitis en la infancia y el fondo de ojo en «sal y pimienta» complementan el diagnóstico de sospecha. Confirmandose, a los 80 años una sífilis congénita tardía curada, por los test serológicos treponémicos (RPR-) y no treponémicos (TPHA+).

Palabras clave: Iridosquisis bilateral, glaucoma ángulo cerrado, sífilis congénita, queratitis intersticial.
INTRODUCTION

Iridoschisis (IQ) is a rare alteration, an expression associated to senile atrophic changes or to coexistence with closed angle glaucoma. However, we also found an association with congenital syphilis with or without interstitial keratitis (IK). The stroma of the iris unfolds beginning with a simple atrophy to an extensive tear of the anterior surface of the iris. We present an iridoschisis case identified by chance and associated to congenital syphilis. Its diagnostic was facilitated by the clinical history and confirmed with lab tests.

CLINICAL CASE

An 80-year-old woman visited the practice for the first time due to traumatic pain in her left eye (LE). Her history includes repeated conjunctivitis in childhood, senile arthritis and four healthy children. The ophthalmological exploration reveals a corneal abrasion in the LE, cured with occlusion and epithelizing cream in one week. In addition, both eyes (BE) exhibited atrophic and unfolded iris (figs. 1a and 1b), with frays and atrophy in the inferior sector, more notably in the LE (figs. 1c, 1d, 1e, 1f and 1g) and a reduction of the anterior chamber, visible also in gonioscopy (figs. 2a and 2b). The patient

Fig. 1a: More acute LE Iridoschisis, greater atrophy of the iris.

Fig. 1b: LE Iridoschisis showing iris unfolding, globule-like.

Fig. 1c: Parched atrophy of LE iris.

Fig. 1d: Iris fibriles.
had an IOP of 24 mm Hg. in BE, with a visual field (Humphrey 30-2) exhibiting a general reduction of sensitivity (figs. 3a and 3b). The ocular fundus exploration revealed hyper-pigmented and atrophic lesions («salt and pepper» pattern) (figs. 4a and 4b).

With a diagnostic of presumed congenital syphilis, as yet without leukomas typical of long-standing interstitial keratitis, we requested serological tests for lues obtained in positive results in treponemic test (TPHA, FTA abs) and negative in non-treponemic tests (RPR).

At this point, the patient was assessed by internal medicine and that is when it was found that the real cause of her conjunctivitis is unknown, although she described in detail the treatments received during nine years, in full she was pre-
Fig. 3a and b: 30-2 Humphrey campimetry for both eyes, general reduction of sensitivity, doubtful glaucomatous pattern.

Fig. 4a and b: Ocular fundus with hyperpigmented and atrophic lesions distributed on the posterior pole with macular Respect responsible for the good CVA: I.
antibiotic, with oral neobismuth, that her «single» mother died young suffering «deformities» and that in the sixties she was given weekly and monthly injections due to non-specified joint problems (probably penicillin). Anamnesis findings were compatible with late congenital syphilis, with successfully treated interstitial keratitis due to the absence of leukomas. Acquired via placenta infection: the mother had severe arthropaty compatible with secondary syphilis, cured due to negative result in RPR test.

**DISCUSSION**

Iridoschisis is defined as the separation of the lower iris stromal layers and their disintegration in fibriles which float in the anterior chamber. Initially described by Schmitt en 1922, the term was proposed by Lowenstein and Foster en 1945, who associated it to senile changes (1-3). Since then around 50 cases have been published, mostly associated to closed angle glaucoma, microphthalmos (1,2), congenital syphilis with interstitial keratitis (1,2,4,5), and others without IK as in the instant case (2,3).

The fact that closed angle glaucoma is the most probable origin of iridoschisis has yet to be proved. Does glaucoma come first and then cause ischaemia in the iris, giving rise to the described changes? Or is it the detritus of the iris that obstruct the trabecular mesh, giving rise to glaucoma? The histological demonstration has not yet answered these questions (1-3).

The association to congenital syphilis was initially seen as a casual finding (3) although the increased number of publications in which syphilitic interstitial keratitis was associated to iridoschisis makes it more probable that the immunological event which gives rise to IK is also the origin of Iridoschisis (1). Some of said cases were confirmed with serological tests (1,3) or clinical semiology suggesting that diagnostic (2,4,5).

In what concerns serodiagnostic, it is established utilising two types of methods: non-treponemic assays such as VDRL (venereal disease lab test) or RPR (rapid plasmatic reagine) which are utilised as screens and to monitor the response to treatment. The other type of assays are treponemic: FTA-Abs (Absortion of fluorescent treponemic antibodies) and TPHA (Hemaglutination of T.pallidum), which are utilised for confirmation and have persistent reactivity, frequently permanent, as in the case described.

Therefore, this is an interesting case for a variety of reasons. The history of conjunctivitis treated with bismuth creams (1937), indicate a resolution of the ocular condition in the absence of invalidating leukomas typical of IK due to congenital syphilis. The «good medicine» of the sixties, with a scarcity of diagnostic means and utilising anamnesis as well as physical exploration and penicillin was able to cure a suspected syphilitic arthropaty similar to that of secondary syphilis. In addition, our finding of bilateral iridoschisis without interstitial keratitis and syphilitic chorioretinosis data, is not previously described although in many published cases the ocular fundus was not explored (3,5).

Accordingly, we emphasize the serological confirmation of congenital syphilis in the 21st century in a woman in her eighties who was unaware of the cause of the disease, probably due to the social stigma it involved.

**REFERENCES**