



# PALPEBRAL TUBERCULOSIS REVEALED BY PARINAUD'S OCULO-GLANDULAR SYNDROME: A CASE REPORT AND LITERATURE REVIEW

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## Abstract

Parinaud's oculo-glandular syndrome is characterized by unilateral granulomatous conjunctivitis associated with lymphadenopathy in the lymphatic drainage area. There are many infectious agents that can cause this syndrome, of which cat scratch disease is the most common cause. Here we report the case of a child with oculo-glandular syndrome caused by tuberculosis. The objective of our work is to focus on this rare etiology of this rare syndrome.

**Key words:** Parinaud's oculo-glandular syndrome; Ocular tuberculosis; Palpebral tuberculosis

## **Introduction:**

Parinaud's oculo-glandular syndrome is a rare clinical presentation [1] associating unilateral granulomatous conjunctivitis with homolateral regional lymphadenopathy. Several infectious agents and autoimmune diseases have been attributed to the etiology of this syndrome. Cat scratch disease caused by *Bartonella henselae* is the most common etiology. [2] Other organisms rarely responsible are *Mycobacterium tuberculosis*, *Mycobacterium leprae*, *Francisella tularensis*, *Yersinia pseudotuberculosis*, *T pallidum* and *C trachomatis*. [2]

## **Observation:**

08 year old child, who consults in ophthalmological emergencies for a red, painless left eye table with edema of the upper eyelid evolving for 02 months, previously treated as bacterial conjunctivitis by local antibiotics without improvement.

After a careful anamnesis, we note the concomitant presence of headache with intermittent fever not quantified and general asthenia. No notion of recent trauma, no known allergies. No notion of tuberculosis contagion in the entourage. However, the presence of animals including cats in the family home.

The ophthalmological examination found visual acuity without correction at 10/10 in both eyes, the upper eyelid of the left eye was swollen with a muco-purulent discharge, and at its eversion we find an irregular granuloma with surrounding follicles. The bulbar conjunctiva is intact, the cornea is clear and the rest of the examination of the anterior segment and the fundus are normal. The examination of the right eye is without particularities.

Examination of the left preauricular region found a firm lymphadenopathy, 2-3 cm in size, and mobile with respect to the skin without inflammatory signs.

The ENT examination eliminated an associated locoregional infection and the rest of the general examination was without particularities.

An ultrasound of these pretrageal nodes confirms their inflammatory type,

In front of this typical picture of Parinaud's oculo-glandular syndrome and the concept of contact with cats, we mentioned the diagnosis of cat scratch disease, the first cause of this syndrome.

A first-line assessment, NFS CRP and the serology of Bartonella (henselae, Afipia), is requested

The results of the biological assessment do not show inflammatory or infectious signs (CRP: 0.2 mg / l; GB: 8 160 elements / mm<sup>3</sup>), and the Serology of Bartonella returned negative.

We completed our assessment with a normal chest X-ray. An intradermal reaction to tuberculin is positive with an induration at 7mm. Other serologies, notably tularemia (*Francisella tularensis*) of syphilis (*Treponema pallidum*) are negative

A cytobacteriological study of the scraping of the conjunctival lesion was normal. A Biopsy of the conjunctival granuloma and pre-tragenic lymphadenopathy, in collaboration with the ENTs, the anatomo-pathological examination highlights a cellular epithelio-giganto granuloma with caseous necrosis in favor of a tuberculosis center.

The anti-tuberculosis treatment is started based on Rifampicin R-Isoniazid H-Pyrazinamide Z with an attack phase in 02 months with triple therapy and maintenance phase in 04 months with dual therapy (2 RHZ 4 RH).

The extension assessment did not show any extraocular lesion.

The monthly follow-up of the patient notices a progressive decrease in the palpebral granuloma with disappearance of the mucopurulent secretions and also a progressive regression of the

pretagenic lymphadenopathies. Also monitoring of ocular toxicity by anti-bacillaries by measuring visual acuity which remains preserved with normal color test at two months and at the end of treatment

## Discussion

Parinaud's oculo-glandular syndrome is manifested by unilateral granulomatous conjunctivitis associated with pre-tragic and submandibular lymphadenopathy. As in our case, this rare syndrome is often misdiagnosed as bacterial or viral conjunctivitis.

It has been linked to several different infectious diseases, in particular cat-scratch disease (*Bartonella henselae*) [3], but it has sometimes been reported in chronic granulomatous infectious infections such as tuberculosis and atypical mycobacteria and syphilis [4] Fungal infections have also been associated with this syndrome. [4]

Extra pulmonary tuberculosis represents 35% of tuberculosis cases, ocular localization is not exceptional, 1 to 2% of cases [7], and can be seen in the context of primary tuberculosis infection or lesions secondary to general tuberculosis. [8]

Ocular tuberculosis is explained by two mechanisms, hematological by direct attack by BK performing microbial metastases or immunological following the hypersensitivity reaction to antigenic release. This is how, from the anatomopathological point of view when it is a direct mechanism, the lesions are typical granulomatous producing a tuberculous follicle. Whereas when it is a hypersensitivity mechanism, histology is without specificity [7]

Ocular tuberculosis presents itself in different ways, the most frequent is an anterior uveitis with miliary tubers of the iris [9] but can also affect all the other structures of the eye giving choroidal tubers, panophthalmia, retinal vasculitis type of occlusive perlepsis with neovessels, optic neuropathy, interstitial keratitis with corneal ulceration or deep nodular keratitis,

follicular conjunctivitis or keratoconjunctivitis, nodular or diffuse scleritis or episcleritis, dacryoadenitis or osteoperitis [7]. The manifestation in the form of a granuloma of the palpebral conjunctiva, as in our case, is rare.

The diagnosis of ocular tuberculosis, in the absence of a lesion accessible to an anatomopathological examination, is presumptive based on a bundle of elements [10] [11]

- Concept of tuberculous contagion.
- Data from clinical examination and fluorescent angiography.
- Value of the intradermoreaction and the sedimentation rate.
- Serologies of tuberculosis in the aqueous humor and in the blood by the search for the genome of the bacillus of Koch by polymerase chain reaction (PCR) method, which unfortunately presents false negatives. [12]

In our case, the diagnosis is made on the basis of the tuberculin positive IDR and the pathological results.

The standardized regimens recommended by the National Tuberculosis Control Program to treat new cases of extra-pulmonary tuberculosis in children recommend a therapeutic protocol in two phases, an attack phase in 02 months under triple therapy (Rifampicin-Isoniazid-Pyrazinamide) and maintenance phase in 04 months under dual therapy (Rifampicin-Isoniazid). [13]

Strict surveillance of patients to watch for possible resistance and side effects. The toxicity of antibacillaries, in particular by isoniazid, results in progressive bilateral retrobulbar optic

neuropathy, settle in at risk subjects and especially if there is an individual susceptibility. [14]

Its management requires the early cessation of toxic and polyvitaminotherapy. [7]

#### **4. Conclusion:**

Parinaud Oculo-glandular Syndrome is a rare, underdiagnosed syndrome that should not be overlooked and managed appropriately.

Tuberculosis is one of the rare causes of this syndrome, the diagnostic difficulty of which is due to the polymorphism of clinical signs, in the absence of ocular lesion accessible to an anatomic-pathological examination the diagnosis is based on a bundle of clinical, biological arguments and radiological.

The treatment is based on general antibacterials with strict monitoring to prevent the side effects of these treatments.

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## Iconographies:

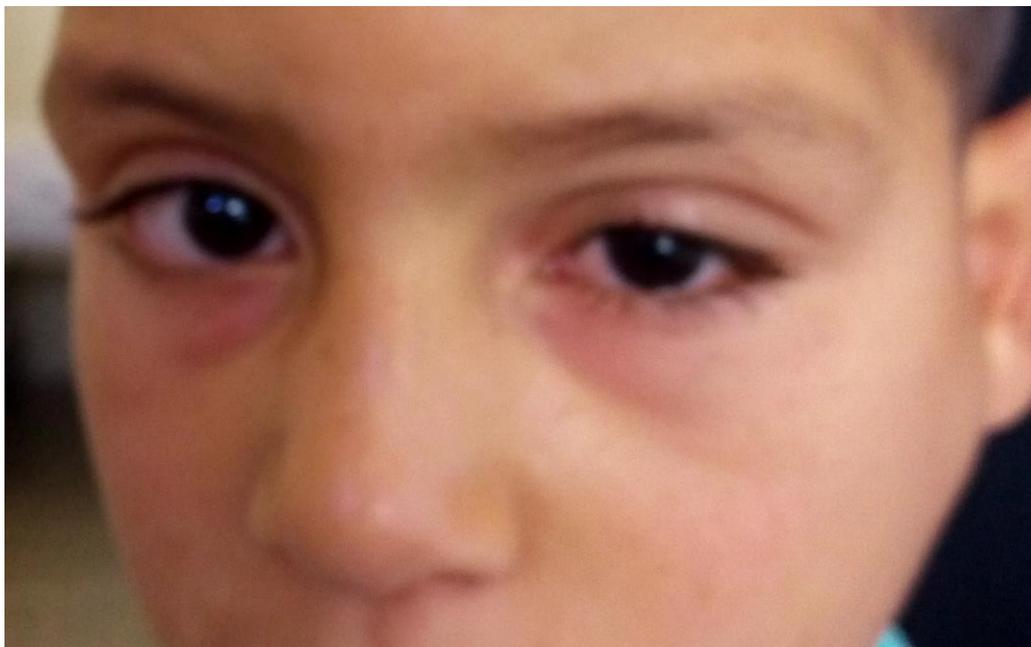


Figure 1: Clinical Picture showing the presentation of the left oculo-glandular syndrome associating a unilateral conjunctivitis with a homolateral lymphadenopathy



Figure 2: image of an overturned OG upper eyelid showing an irregular granuloma with surrounding follicles with mucopurulent discharge



Figure 3: image after 3 months of treatment showing the progressive regression of the palpebral granuloma with disappearance of mucopurulent secretions

