

NEWBORN CHRONIC FOLLICULAR CONJUNCTIVITIS

CONJUNTIVITIS FOLICULAR CRÓNICA EN EL LACTANTE

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ABSTRACT

Case report: A case of chronic follicular conjunctivitis in an infant presenting with ptosis and dacryorrhea is reported. Polymerase chain reaction (PCR) test identified *Chlamydia trachomatis* as the causative agent. The patient was treated with topic and systemic erythromycin. The infection was probably transmitted during delivery.

Discussion: Chronic follicular conjunctivitis in infants is very uncommon in our environment. The most sensitive and specific diagnostic test is PCR. It is necessary to identify the original focus of infection and to provide specific treatment to all the carriers as soon as possible to avoid and prevent chronic complications (*Arch Soc Esp Oftalmol* 2008; 83: 559-562).

Key words: Chronic follicular conjunctivitis, infant, *Chlamydia trachomatis*, paratrachoma, PCR.

RESUMEN

Caso clínico: Se presenta un caso de conjuntivitis folicular crónica del lactante que debuta como ptosis y dacriorragia. Mediante técnica de reacción en cadena de polimerasa (PCR) se diagnosticó *Chlamydia trachomatis* como agente etiológico y se trató con eritromicina tópica y sistémica. El contagio se produjo en el canal del parto.

Discusión: La conjuntivitis de inclusión del lactante es muy infrecuente en nuestro medio. El método diagnóstico más sensible y específico es la PCR. Se debe identificar la fuente de contagio y hacer un tratamiento precoz y completo de todos los portadores para evitar las complicaciones de la cronicidad.

Palabras clave: Conjuntivitis folicular crónica, lactante, *Chlamydia trachomatis*, paratrachoma, PCR.

INTRODUCTION

The majority of follicular conjunctivitis diagnosed in our country are of viral etiology, mainly virus herpes simplex (VHS) and adenovirus. Chronic conjunctivitis are infrequent (table I) (1)

and of note amongst these are inclusion conjunctivitis.

Neontal conjunctivitis is a disease which must be declared. The most frequent cause in the world is inclusion conjunctivitis due to *Chlamydia trachomatis*, although in our country the most frequent

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Table I. Etiological classification of modified follicular conjunctivitis¹

Acute	Chronic
Adenovirus	Adult inclusion conjunctivitis
RNA virus	Neonatal inclusion conjunctivitis
Togavirus	Chlamydia trachomatis
Picomavirus	Pistacosis
Poxvirus	Moraxella
Orthomixovirus	Lyme's disease
VHS	Pharmacologic
VEB	Moluscum
	Rosacea

cause is bacterial conjunctivitis, mainly by gonococci (1).

Chlamydia trachomatis is an obliged intra-cellular bacillus, an exclusively human pathogen. Serotypes A, B and C account for the trachoma, while strains L of the venereal lymphogranuloma and hemorrhagic proctocolitis and serotypes D-K produce sexually transmitted diseases and perinatal infections, typically inclusion conjunctivitis and interstitial pneumonitis.

The diagnostic for neonatal conjunctivitis due to chlamydia as well as to gonococci require a high index of suspicion and an early treatment with systemic antibiotherapy.

CASE REPORT

A female patient, 7 months old, with slight unilateral ptosis (fig. 1) and dachryorrhagia with crying



Fig. 1: Basal condition of the patient. Slight left unilateral ptosis.

and expression of the lachrymal sac since day 15 of her life. She was born in Spain but her mother was from Eastern Europe. The ophthalmological exploration revealed a left superior sub-tharsal pseudomembrane and pre-auricular adenopathy without secretion or hyperemia, exhibiting also superficial pannus in the superior limbic area. Cleansing of the lachrymal pathway was permeable and a conjunctival exudate culture was negative. The initial study comprised a magnetic resonance and a ENT exploration which discarded paranasal sinus and lachrymal drainage system pathology. Topical treatment was initiated with tobramycin and dexamethasone. One month later a partial resolution of the ptosis was observed, and a total resolution of the pseudomembrane. After two months, sub-tarsal follicles persisted in different stages (fig. 2). Accordingly, PCR (polymerase chain reaction) identification of *Chlamydia trachomatis* was requested, with positive result. Topical treatment was initiated with erythromycin in cream and orally (50 mgrs/kg/day in 4 takes) for 14 days. At the end of the treatment the clinical findings had all but disappeared. A PCR study was made of the conjunctival exudate and urine analysis of the individuals living with the patient. The only positive test was that of the mother, who at the time was carrying a 29-week pregnancy. However, the maternal cervix culture was negative for *Chlamydia trachomatis*. Systemic treatment was prescribed for the parents with erythromycin (500 mg/6 h) for 7 days. The eradication of the germ was confirmed by means of PCR of the conjunctival exudate of the patient and the mother's urine.



Fig. 2: Subtarsal follicles in the superior eyelid in different evolution stage.

DISCUSSION

The most frequent cause of neonatal conjunctivitis in the world is inclusion conjunctivitis, an entity which is virtually eradicated in our country. It is caused by *Chlamydia trachomatis* having serotypes D-K. Clinically it expresses as a purulent conjunctivitis which begins 5-12 days after birth, without follicles in acute phase which, in severe cases, develops pseudomembranes and corneal neovascularization.

In our country, neonatal prophylaxis is carried out with erythromycin cream or silver nitrate. Both remedies prevent gonococci or bacterial conjunctivitis but do not affect the one produced by *Chlamydia*. The iodine-added povidone solution at 2.5% is equally efficient against *Staphylococcus aureus* and *Neisseria gonorrhoeae* and is also efficient against *Chlamydia trachomatis*, exhibiting a lower prevalence of toxic conjunctivitis (2).

Infant conjunctivitis by *Chlamydia trachomatis* is an infradiagnosed entity, exhibiting a self-limited sub-clinical development which usually leads to it being interpreted as viral conjunctivitis (3).

The diagnostic method with most sensitivity and specificity is PCR, which must be done for the patient and all the other members of the household. The treatment must be applied to those who give a positive result and to their sexual partners until an additional PCR confirms the negative result.

In what concerns chronicity, some of the possibilities are reinfections, personal vulnerability (4), cleanliness conditions. Contagion is possible by vectors (endemic areas) and the pathogenicity of the micro-organism.

Without adequate treatment, follicular conjunctivitis due to chlamydia becomes chronic and can cause a paratrachoma, an entity produced by D-K serotypes in non-endemic areas which generates cicatricial lesions parallel to the trachoma.

When a neonatal conjunctivitis due to *Chlamydia trachomatis* is diagnosed, the mother is the trans-

mitter in 87% of cases (5). The colonization of the oropharynx is very frequent, which could be the origin of possible re-infections (5).

The treatment of choice in adults is systemic erythromycin, 500 mg/6 h for 7 days, without requiring simultaneous topical treatment. Although this is a safe and effective treatment, in non-responding patients the prescription can be repeated or other, second choice treatments could be utilized, including azitromycin 1 gr/day for 7 days, doxycycline 100 mg/12h for 7 days, or ofloxacin 300 mg/12h for 7 days.

Neonatal conjunctivitis due to *Chlamydia trachomatis* is more prevalent than suspected, particularly in under-privileged socioeconomic environments. It is important to identify the source of contagion and initiate early and effective treatment to prevent scarring in cases which may become chronic. Even though chronic conjunctivitis coursing with dacryorrhagia is highly infrequent, it is strongly suggestive of infection by *Chlamydia trachomatis*. The differential diagnostic must always include other potentially severe entities.

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