



Adult Inclusion Conjunctivitis

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General Characteristics

- *Chlamydia* are obligate intracellular parasites, *C. trachomatis* causes inclusion conjunctivitis, trachoma, cervicitis (women) or urethritis (men)
- Infectious agent: **Chlamydia trachomatis, sexually transmitted disease**, (serotypes D through K)--A virus-like bacteria
- "The silent epidemic": Most prevalent sexually transmitted disease in USA (3 to 5 million Americans with new cases per year; 10% of all college students)

- Eye disease in adults occurs in about 1 in 300 genital cases
- Sexually active adults (15-40 years) who usually have a history of recent change in sex partners (preceding 2 months) and oral-genital sexual practices
- Ocular inoculation may occur by spread from the genitalia to fingers to the eye, from the genitalia directly to the eyes or rarely from the genitalia to fomites to the eyes
- Subacute onset with a chronic course if untreated

- Incubation period: 4 to 12 days
- Most frequent cause of neonatal conjunctivitis (50% infected); 20% to 30% develop pneumonia

Mode of Transmission

- Inoculation of discharges from genital area to eye occurs by direct or indirect contact during oral-genital sexual activity or from infected genitals to eyes by fingers
- Rarely swimming pools or hot tubs because of improper chlorination (more commonly cause adenoviral infections)

Systemic Signs and Symptoms

- ❑ *A history of cervicitis, vaginitis, salpingitis, urethritis, and pelvic inflammatory disease in women (50%)*
- ❑ *Leading cause of infertility in USA*
- ❑ *Urethritis in males*
- ❑ *Genital symptoms not always obvious*
- ❑ *Mild preauricular lymphadenopathy*

- ❑ *Mild ear infection: Otitis media on the same side of red eye*
- ❑ *Pneumonia in newborns*

Ocular Symptoms

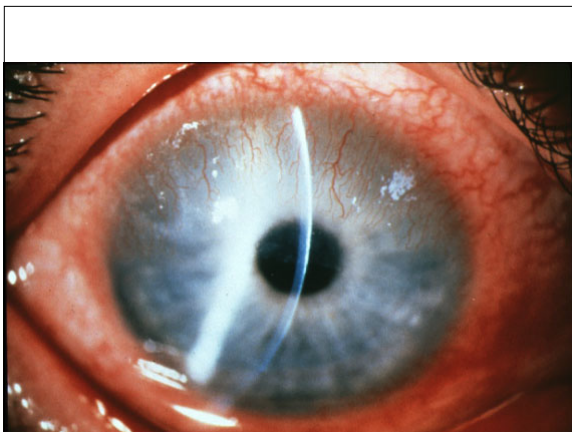
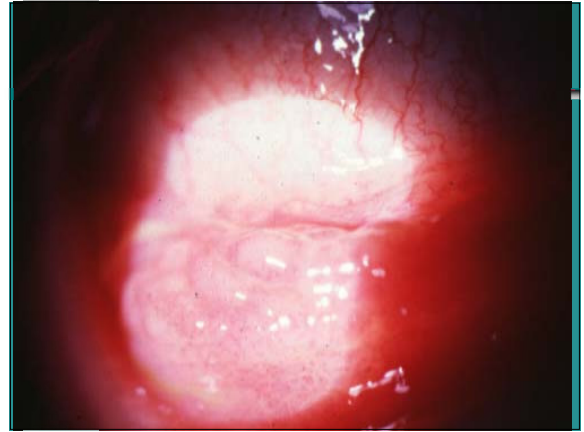
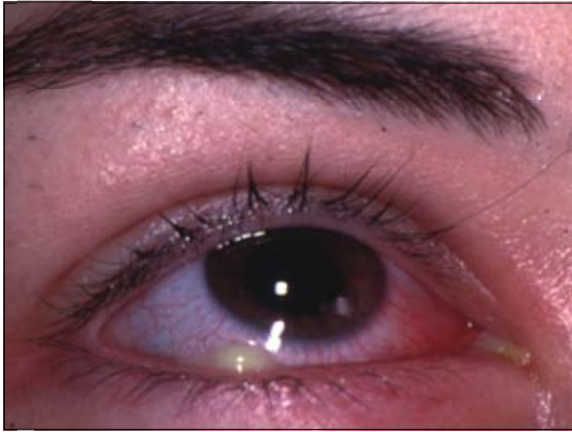
- ❑ *Acute to subacute onset of red eye with mucopurulent discharge (more mucoid in nature)*
- ❑ *Foreign-body sensation, tearing, photophobia, lid swelling & slight ptosis*
- ❑ *Unilateral more common than bilateral*
- ❑ *An eye infection for greater than 3 wks despite treatment*

Ocular Signs

- ❑ *Acute/chronic follicular conjunctivitis (4 to 5 months or longer): Mixed reaction of follicles and papillae, most common inferiorly*
- ❑ *Bulbar/limbal follicles*
- ❑ *Variable PEK (90%), more common in periphery, usually after 2nd week*
- ❑ *SEI similar to EKC but not as dense, central, or symmetrically placed; greater superior third and peripheral, may have marginal infiltrates*

- ❑ *Superior micropannus rarely noted*
- ❑ *Rarely anterior uveitis (e.g. R/O Reiter's syndrome- Arthritis, urethritis & conjunctivitis or iritis)*
- ❑ *Membranous conjunctivitis does not occur in adult inclusion conjunctivitis, but does occur in EKC: Helpful in differential diagnosis*





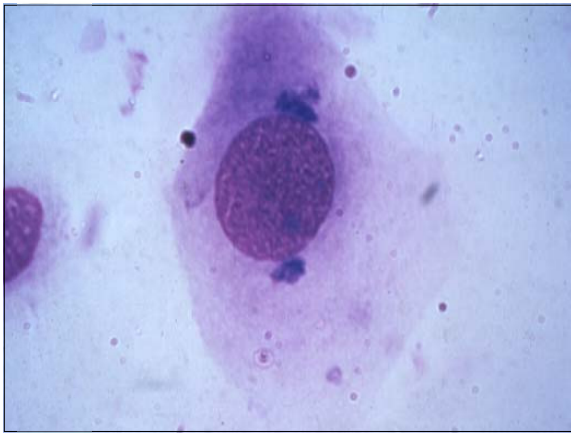
Course of Infection

- **Chronic nature** (greater than 3 weeks until proper treatment; may persist from 3 to 12 months)
- During first 2 to 3 weeks of infection, confusion with viral or bacterial keratoconjunctivitis
- Lack of response to topical antibiotic treatment; may suppress symptoms

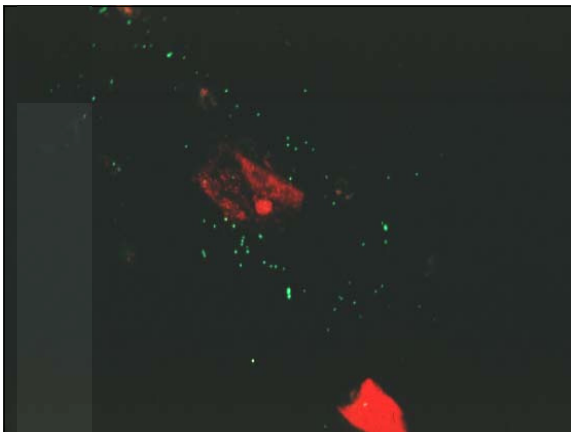
- *Topically applied corticosteroids:
Noticeable symptomatic relief initially,
but disease rebounds when drug is
stopped and disease is prolonged*

Laboratory

- *Giemsa stain: Monocytes, neutrophils,
and basophilic inclusion bodies in
cytoplasm of epithelial cells (low
success rate in adults; more helpful
neonates)*



- *Monoclonal antibody labeled with
fluorescein (MicroTrak, Syva Co., Palo
Alto, CA)*
 - *Quick and easy*
 - *Widely available*
 - *Inexpensive*
 - *Less sensitive than cell culture?*



- *Enzyme-linked immunoassay*
 - *Chlamidiazyme (Abbott)*
 - *Surecell Chlamydia Test (Kodak)*
- *New: Polymerase chain reaction (PCR)
test*

- ❑ **Cell culture**
 - Chlamydial transport medium for inoculation to McCoy cells
 - Not widely available
 - Requires 3 days
 - Expensive

Management and Treatment

- ❑ Because infection is not limited to the eye, it is necessary to use systemic treatment
 - Oral tetracycline (Achromycin) 250 or 500 mg qid x 1-3 weeks (best taken on empty stomach 30 minutes before or 2 hours after meals)

- Oral doxycycline (Vibramycin) 100 mg bid x 1-2 week
- Oral erythromycin (Ilotycin) 250 or 500 mg qid x 1 week in children < 150 lbs., pregnant and lactating women because of drug deposition in teeth and bones
- **Azithromycin** 1 gm, 1 dose, 250 mg qid x 1 day **treatment of choice**

- ❑ **Topical treatment**
 - Tetracycline or erythromycin ointment qid x 7 days
 - Topical corticosteroid for symptomatic keratitis; must use effective antichlamydial agent

- ❑ Patient subjective response to treatment within a week, signs may take a month to clear
- ❑ Important to identify sexual partners - Treat sexual contacts to eliminate risk of infection
- ❑ Consider Reiter's syndrome if arthritis
- ❑ Patient education
- ❑ Referral to general physician; search for other venereal disease

Avoid Tetracycline Or Doxycycline in

- ❑ Pregnant & lactating women
- ❑ Children under 8 years-can discolor the teeth & depress the bone development
 - Antibiotic is deposited in growing bone and teeth (being bound to calcium) and may cause dental scarring and hypoplasia
- ❑ Use erythromycin 500mg qid for 1 week

Comange with Physcian

- *Can result in severe pelvic inflammatory disease, ectopic pregnancy & infertility*