

# STUDY OF CHLAMYDIAL INFECTION IN AN OUTBREAK OF CONJUNCTIVITIS

by

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## SUMMARY

The outbreak of conjunctivitis in mothers and new born babies was studied and investigated at Govt. Medical College and Hospital, Nagpur during Oct.-Nov. 1985. Total 90 mothers and 100 babies were affected. Conjunctival smears were taken in 47 mothers and 37 new born babies and cervical scraping for Chlamydia was done in 31 mothers.

The conjunctival smear was positive for Chlamydia in 31.9% mothers and 35.13% babies, whereas cervical scraping for chlamydia was positive in 12.9% cases.

## Introduction

Interest in genital chlamydial infection has intensified in the last two decades, but it is now more than 10 years since Halberstaedter and von Prowazek demonstrated inclusion bodies in the conjunctivae of infants, neonatal conjunctivitis and in the cervixes of their mothers. This association and its clinical indications are still widely not appreciated today.

Chlamydia Trachomatis is an obligate intracellular parasite of the genus chlamydia. Serotypes D-K have been implicated in a wide range of genital tract infections and are amongst the most commonly isolated pathogens from the female genital tract.

The frequency with which Chlamydia can be isolated from the female genital tract depends on the population studied

and it is clear that there are considerable differences reflecting geographical and socio-economic factor.

The high rate of asymptomatic infection and the tendency for these to be self limiting makes its pathogenic role in the female genital tract difficult to evaluate. The results of various types of studies conducted so far have suggested associations between chlamydia and Bartholin'sitis, cervicitis, salpingitis, infertility, cervical dysplasia, urethral syndrome and perihepatitis.

## Material and Methods

The outbreak of conjunctivitis which occurred in the post natal wards at Govt. Medical College and Hospital, Nagpur in both mothers and new born babies from the 18th October, 1985 till 20th November, 1985, was investigated thoroughly. Clinically the conjunctivitis appear to be of viral nature and the appropriate topical application of neosporin eye drops

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four hourly, was done. Conjunctival swabs were sent for culture and sensitivity. These patients were isolated.

The conjunctival swabs studied showed the evidence of Chlamydia inclusion conjunctivitis; hence the patients were put on terramycin capsules 250 mg every 6 hourly for 7 days. The babies were given erythromycin syrups. Terramycin ointment and gentiycin eye drops were applied topically 2 hourly, cervical scrapings of affected mothers were done.

#### Observation

Out of the affected 90 mothers, 6 were admitted with conjunctivitis and maximum patients (45) developed conjunctivitis after 5 days.

One hundred new born babies were affected. Out of these 52 babies developed conjunctivitis after 5 days, whereas 25 babies developed conjunctivitis within 24 hours (Table I).

Conjunctival smears were taken in 47 mothers and 37 babies. Out of these, in 31.9% mothers and 35.13% babies the smears was positive for Chlamydia, whereas the cervical scraping for Chlamydia was done in 31 patients which turned out to be positive in 4 patients (12.9%).

#### Discussion

In order to study the risk of acquiring congenital infection, several groups of workers have followed infected women through their pregnancies and examined and followed up their infants. Alexander *et al* (1977) isolated Chlamydiae from 18 (12.7%) of 142 pregnant women studied. Nine of the babies developed conjunctivitis and 8 developed cultural and serological evidence of chlamydial infection.

Franmell *et al* (1979) isolated chlamydiae from 30 of 340 women studied and were able to follow up 18 until their infants were 9 months old. Eleven (61%) of these infants subsequently developed

TABLE I  
Occurrence of Conjunctivitis in Hours After Delivery

	Before Admission	Within 24 hours	2-4 days	5 days & onwards
Mothers	6	10	29	45
Babies	—	25	23	52

TABLE II  
Percentage of Cases Positive for Chlamydia

	No. of cases	+ve smear	Percentage
<i>Conj. smears</i>			
Mothers	47	15	31.9
Babies	37	13	35.13
<i>Cx. scraping</i>			
Mothers	31	4	12.9

evidence of chlamydial infection. Eight developed conjunctivitis and 2 pneumonitis.

Hammerschlog (1979) studied 322 pregnant women (isolating chlamydiae from 6 (2%). Four of 6 infants (67% developed chlamydial infection compared with 3 (5%) infants born to culture negative control patients.

Chlamydiae were isolated from 2 out of

54 women (3%) attending family planning clinic in Bristol (Hilton *et al*, 1974).

In contrast to the sparse data from other populations women attending STD clinics are reported to have chlamydial infection in about 20 to 25% cases.

Out of the affected mothers, 37 had conjunctivitis. Conjunctival smear was positive for Chlamydia in 12 mothers i.e. 32.4%. Among 12 patients 2 showed evidence of chlamydia in cervical scrape.

Conjunctival smear in 7 of the babies (58.3%) indicated chlamydia. Their mother also showed the same.

The long term follow up was done in neonates upto one month; and 2 of them had pneumonitis.

The development of inclusion conjunctivitis and puerperial sepsis of chlamydia origin can largely be prevented by its routine antenatal (screening and subsequent treatment).

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