eISSN: 2349-5715 pISSN: 2349-5707

Volume: 11, Issue 12, December-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

Kasimova G.Z.

Andijan State Medical Institute , Uzbekistan

EARLY DIAGNOSIS AND TREATMENT OF EYE INFECTIONS COMMON IN INFANCY

Annotation: Chlamydia trachomatis was first isolated from the eyes of an infant with neonatal conjunctivitis in 1959. The organism could also be recovered from the uterine cervix of the mother of an infected infant. Inoculation of volunteers with the isolated agent caused clinical signs similar to acute trachoma with typical cellular inclusions. Inclusion conjunctivitis in newborn babies has been known since the first decade of this century and was called inclusion blenorrhea by Lindner. It is now recognised that C. trachomatis is one of the major causes of sexually transmitted diseases in industrialised countries. The infection can be transmitted to the infant at delivery when the mother is affected. The genital strains of C. trachomatis belong with few exceptions to one of the serogroups D through K. Classical trachoma in developing countries is associated with ocular strains generally belonging to the serotypes A through C. Neonatal chlamydial eye infection has been considered virtually nonexistent in areas with endemic trachoma like Egypt and Saudi Arabia. In Africa both neonatal chlamydial eye infection and classical trachoma have been observed in the same population,6 and recent reports indicate that neonatal chlamydial infection may be a substantial problem in different African countries.

Key words: Eyes, infection, Chlamydia trachomatis.

Prospective studies during the last few years in the USA have shown that 2-18% of pregnant women have genital chlamydial infection and that 20-35% of the infants of infected mothers develop symptomatic eye infection.9-'3 A smaller proportion of infants present a pneumonia syndrome at 1-3 months of age with potentially a life-threatening severity. Some two-thirds of all infants exposed to the infection have serological signs of chlamydial infection. Infants to mothers with chlamydial infection were also far more likely to contract the infection than control children of mothers in whom infection could not be demonstrated. Genital chlamydial infection in puerperal women in Sweden has been detected in 2% and 7% in different areas. 1415 In this study the occurrence of C. trachomatis in children with neonatal conjunctivitis and in healthy infants was compared. The late consequences of chlamydial conjunctivitis were evaluated. Maternal infections were also studied as well as the outcome of the pregnancies.

Materials and methods Study group. Infants below 6 months of age attending the Department of Ophthalmology for purulent eye inflammation were examined for the presence of C. trachomatis in the eyes. However, all infants fulfilling these criteria could not be examined forchlamydial infection for practical reasons, but there was no obvious bias in the group of infants examined. This group included 281 infants. All infants received Crede's prophylaxis by silver nitrate. There is only one hospital serving a city population of a quarter of a million people. Patients with acute symptoms of some significance are normally seen at the hospital. When a positive chlamydial isolation was obtained from the eyes of an infant, the mother was referred to a gynaecological examination for detection of genital chlamydial infection. Follow-up examination was possible on 23 infants with chlamydial eye infection. It was performed when the infants were 6 months to 3 years and 11 months old, with a mean age in the group of 2-1 years. Control group. 161 healthy children 3-4 weeks of age were examined for the presence of chlamydial eye infection at a routine examination at health care centres for children, where all infants are seen at regular intervals. Both sexes were equally represented. Chlamydial isolation. Specimens for chlamydial isolation were obtained by cotton-tipped swabs and transported in 2 SP-

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 11, Issue 12, December-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

medium. Irradiated McCoy cell cultures were inoculated in duplicate and chlamydial inclusions detected after 72 h by iodine staining Results Neonatal chlamydial eye infection. During a 4-year period, 1978 through 1981, 39 cases of ophthalmia neonatorum associated with Chlamydia trachomatis were detected among 281 infants with conjunctivitis. Most chlamydial infections were detected before the infants reached 1 month of age, and after 2 months of age no more chlamydial isolations were obtained . In 36 cases the infants were delivered at the Department of Obstetrics at this hospital, and in 3 cases the infants were born at other hospitals but the parents moved to Malmo soon after delivery. As seen in Table 2 on average 9 out of 2400 (0.4%) infants born each year with neonatal chlamydial infection were found. Delivery records were available in 34 cases of the infants with chlamydial conjunctivitis. These 34 infants were born after 34 to 42 gestational weeks, with a mean at 40 0 weeks, and weighed between 2250 and 4110 g, mean weight 3290 g. At delivery the infants who developed chlamydial infection were assessed for vital signs and assigned an Apgar score of 8 through 10 with a mean of 9. Only one infant was born prematurely; the other 33 deliveries were considered normal, although vacuum extraction was performed in one case. Among the infants with chlamydial eye infection none was delivered by caesarean section, though the average frequency of caesarean section at this hospital is about 10%. A third of the infants infected were boys, but the difference between boys and girls among affected infants was not statistically significant. The whole group of children consisted of girls and boys in equal proportions. When they were seen in the hospital, infants with chlamydial eye infection usually presented with moderate to severe symptoms. These were often more pronounced in one eye, especially in the early stages of the illness. There was often substantial swelling of the eyelids, conjunctival congestion, mucopurulent discharge, and in some advanced cases a follicular roughness was seen in the fornices. Pseudomembrane formation was also detected in some cases. Control infants. A control group consisting of 161 healthy infants were examined for the presence of chlamydial eye infection at 3 to 4 weeks of age when chlamydial conjunctivitis is usually manifest. In no case was C. trachomatis demonstrated in conjunctival swabs. Maternal chlamydial infection. A gynaecological examination was arranged for mothers to the infected infants. Specimens for isolation of chlamydia were obtained from 33 of the women. C. trachomatis was isolated in 16 (48%) cases. Post-partum endometritis developed in one case and salpingitis in another. These 2 women received antibiotic treatment before chlamydial isolation was attempted. The age distribution of the mothers with infected children was different from that of the whole group of mothers (Table 3). Mothers with infected children tended to be younger than average, 24 years for mothers with infected infants and 28 for the whole group. There was no difference in age between the 16 mothers with detectable chlamydial infection (mean age 23-4 years) and the 17 women in whom C. trachomatis was not demonstrated even though their children had the infection (mean age 24-2 years, t=0-61, NS). Treatment. After C. trachomatis was found in eye swabs from the infants, erythromycin ethylsuccinate, 40-50 mg per kg body weight per day, was given by mouth for 2 weeks. Topical chloramphenicol or sulphamethizole were also used regularly to combat possible coinfection by other pathogens. In some cases symptoms had persisted for several days despite topical treatment, but a prompt response was seen when systemic treatment was instituted. One case was still chlamydia-positive after one week of erythromycin treatment but healed microbiologically and clinically after another week. Chlamydial isolation attempted from the conjunctivae of 20 cases after systemic erythromycin treatment was negative in all cases. Infected mothers were given erythromycin stearate, 500 mg twice a day, for 2 weeks. Follow-up examination. Of the 39 infants with neonatal chlamydial infection 23 could be traced for a late follow-up examination, which was performed when the children had reached the age of 2y 1 years on average. Swabs from the eyes were obtained from 22 cases and were uniformly negative for C. trachomatis. Late sequelae were discovered in 3 cases. Two infants had tarsal scars and one had corneal lesions consisting of superficial maculae but no signs of activity. In 2

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 11, Issue 12, December-2024 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

of these cases systemic treatment intended to control chlamydial infection had been delayed, and lack of compliance was admitted in one case. It was not possible to examine the smallest children by the corneal microscope, so that minor lesions may have remained undetected in some cases.

References :

1. Jones BR, Collier LH, Smith CH. Isolation of virus from inclusion blennorrhea. Lancet 1959; i: 902-5.
2. Jones BR, Collier LM. Inoculation of man with inclusion blennorrhea virus. Ann NYAcad Sci 1962; 98: 212-26.
3. Stargardt K. Epithelzellveranderungen beim Trachom und anderen Conjunktivalerkrankungen. Albrecht von Graefes Arch Klin Ophthalmol 1909; 69: 525-42.
4. Halberstadter L, von Prowazek S. Uber Chlamydozoenbefunde bei Blennorrhea neonatorum non gonorrhoica. Berl Klin Wochenschr 1909; 46: 1839-40.
5. Lindner K. Gonoblennorrhoe, Einschlussblennorrhoe und Trachom. Albrecht von Graefes Arch Klin Ophthalmol 1911; 78: 345-80.
6. 6 Sowa S, Sowa J, Collier LH. Investigation of neonatal conjunctivitis in the Gambia. Lancet 1968; ii: 243-7.
7. Mabey DCW, Whittle HC. Genital and neonatal chlamydial infection in a trachoma endemic area. Lancet 1982; ii: 300-1.