Case Report

A Case of Acute Gonococcal Conjunctivitis in an Unusual Age Group

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Abstract

Introduction: This is a case of case of acute gonococcal conjunctivitis in a 2.5 years old female child.

Case: A 2.5 years old female child presented with redness, purulent and profuse discharge from left eye with associated upper eyelid swelling. The culture of conjunctival swab revealed Neisseria gonorrhoeae. The child was treated with intravenous antibiotics and fortified medications.

Conclusion: Unlike young adults and newborn gonococcal conjunctivitis (GCC), children can have a nonsexual mode of transmission and could be seen in an unusual age group. For the management of the diseases, proper history including sexual abuse history and thorough physical examination is mandatory, which is sometimes difficult in a developing country. Gonococcal conjunctivitis in the toddler group should be kept in consideration.

Key words: Gonococcal conjunctivitis, Gonorrhea, Non-sexual transmission.

Introduction

Gonococcal conjunctivitis is a sexually transmitted disease resulting from direct transmission of the organism, for example from genitalia to the hands and then to the eyes or from the mother to the neonate during vaginal delivery.

The proper sexual history is mandatory in each patient who presents with purulent discharge. (Mc Anena et al, 2015 and Bodurtha et al, 2017). Gonococcal conjunctivitis is an ophthalmic infection with Gram-negative diplococci Neisseria gonorrhoeae, and it is rare in non-neonatal populations. GCC is prevalent in neonates and young adults. Around 1-12% of neonates suffer from GCC. (Levis et al, 1990)

Gonococcal conjunctivitis presents with the explosive onset and very rapid progression of severe purulent conjunctivitis, massive exudation, severe chemosis, eyelid edema, marked conjunctival hyperemia and in untreated cases, corneal infiltrates, melting and perforation.

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Case report

A 2.5 years old female child was brought to the emergency department of Tilganga Institute of Ophthalmology, Nepal with 2 days history of redness, purulent, profuse discharge from the left eye with associated upper eyelid swelling. The mother neither gave a history of fever, trauma, any insect bite nor any symptoms of urinary infections and another systemic disease to the child.

Regarding family history, father is working outside the country and has not returned home for 3 years. Mother is a housewife having no similar history in the family. The mother didn't give any history of foul-smelling vaginal discharge, symptoms of urinary infection and sexually transmitted disease. The mother and the child are in good hygienic condition.

The mother did not give any history of sexual abuse to the child. She was irritable and uncooperative.

Examination, revealed marked erythema of the left upper eyelid with edema, congestion of the conjunctiva, purulent discharge leading to difficulty in opening the eye. Extraocular movements were full, Proptosis was absent. Cornea had an epithelial defect but no infiltrates.

The results of the remainder of the physical examination were unremarkable.

In the OPD, LE conjunctival discharge was sent to the lab.

Conjunctival discharge – Gram stain, Giemsa stain, KOH wet mount and conjunctival C/S sent in the laboratory on the same day.

Report of Conjunctival discharge –

Gram stain – Pus cells 5-plenty/ OIF. Gram-negative diplococci were seen.

Giemsa stain – Pus cells 8-plenty / OIF.

KOH - No fungus is seen.

Treatment was initiated with Intravenous Ceftriaxone 125mg/dose and fortified antibiotic drop. Both the child and mother were advised for the pediatrician and venereology consultation respectively.

The child was followed up every day. In subsequent days, swelling of lids decreased. Conjunctival congestion was also decreased. The corneal epithelial defect was less. The child was able to open the eyes.

3rd day of presentation –

Conjunctival swab: Culture on Thayer martin medium- Neisseria gonorrhoeae isolated.

Sensitivity report -

Cephalexin, Gentamycin, Chloramphenicol, Ofloxacin, Ceftazidime, Amikacin, Tobramycin, Cefazolin, Cefixime, and Moxifloxacin - Sensitive

Tetracycline, Ciprofloxacin, Vancomycin, and Gatifloxacin – Resistant

Intravenous Ceftriaxone was continued for 5 days and fortified eye drops were also continued according to the sensitivity report.

The urine routine report showed normal finding and culture showed no growth of microorganisms.

The patient regularly followed up and 12 days of initiation of medication, lids were back to normal. Conjunctival congestion has markedly decreased. Hence, the child was able to open her eyes. The patient was asked to follow up after 2 weeks with topical medications. Fortified antibiotic drops were switched over to Gtt. Moxifloxacin which is sensitive to bacteria.

The child's mother was asked to consult a venerologist and do the serology tests but she refused to do so.

After 2 weeks, the child did not come for a follow-up. When we did an inquiry via phone, the mother said the child was doing good and couldn't follow up due to her family problems and, about the consultation with Venereology she denied doing so.

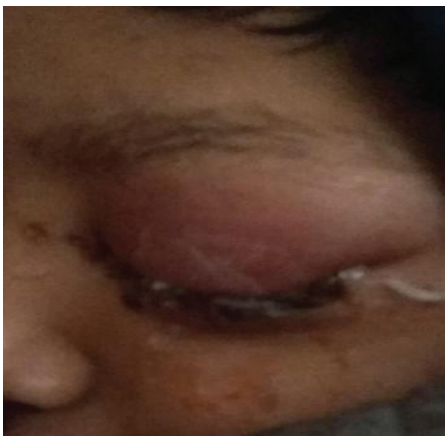
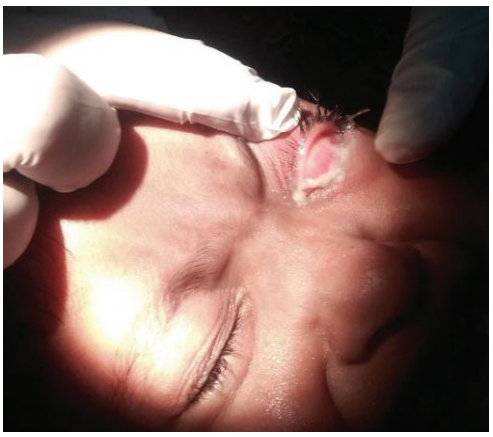

Figure 1 and 2: A profuse mucopurulent discharge on the left eye with redness and swelling.

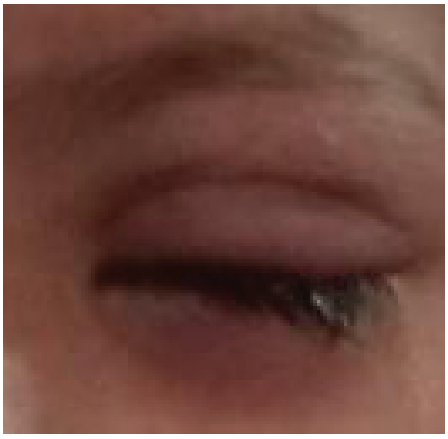
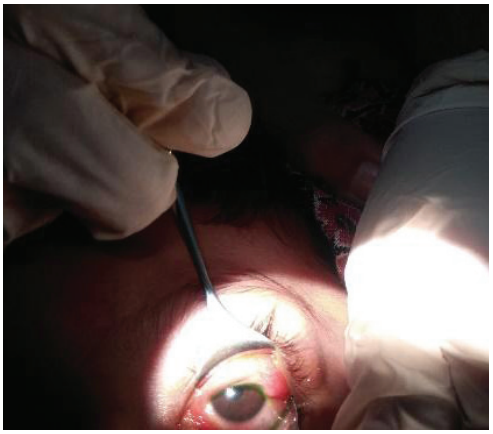

Figure 3 and 4: After 3 days of initiation of Intravenous antibiotics and fortified medications.

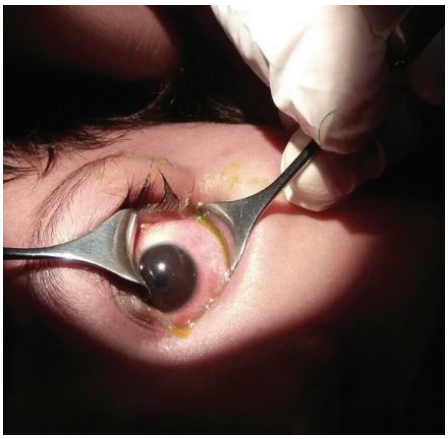
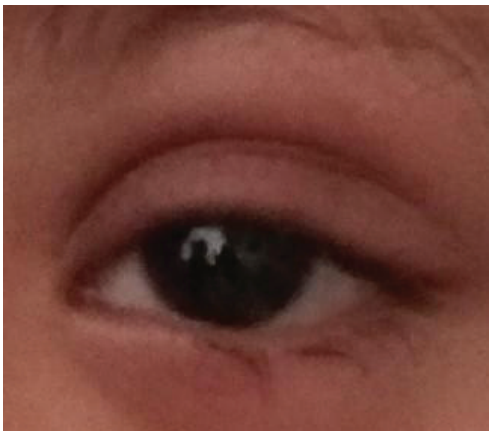

Figure 5 and 6: After 2 weeks of treatment – reduction of lid swelling and minimal discharge.

Discussion

Gonococcal conjunctivitis is commonly seen in newborns or in sexually active adults. In toddlers, it is a rare entity so the history of sexual abuse should be evaluated with utmost importance. However, in our case, it was not

present. In some literature, they have mentioned that isolated GCC, unlike genital, rectal, or pharyngeal gonorrhea, in some cases they have a nonsexual mode of transmission via infected parents.

The rapid progression of the disease and its severity needs prompt diagnosis and initiation of parenteral antibiotic therapy (Lewis 1990).

Shore and Winklestein (1971) and Doyle (1972 and 1974) have suggested the possibility of non venereal transmission in prepubertal children with GCC. However, in our study, culture of pharynx, genitalia, and rectum could not be performed as the child was very uncooperative on the day of presentation.

The confirmed isolation of N gonorrhea is sufficient evidence to investigate for the possibility of sexual abuse. All children should undergo a detailed social evaluation to reveal evidence or suspicion of sexual abuse. A history of sexual abuse is often difficult to obtain in our context even in patients with clear medical evidence of abuse. It is impossible to be certain that these cases of isolated GCC in prepubertal children were transmitted non sexually. Thus, isolated prepubertal GCC, unlike genital, rectal, or pharyngeal gonorrhea, may, in some cases, have a nonsexual mode of transmission. Culture specimens from close household contacts, who may be asymptomatic, are useful in identifying the source of infection. (Lewis et. al. 1990)

Conclusion

GCC is commonly seen in newborns and young adults; however, GCC is rarely seen in the toddler age group. In a developing country like ours, it's very difficult to elicit family history and sexual abuse history. Both the parents should be investigated in terms of history and serology tests, which sometimes becomes impossible in our context. Even then one should always try to elaborate these points as it is very necessary for the proper management of the disease course.

GCC has a very rapid progression and leads to severe complications such as cornea melting and corneal perforation which needs prompt diagnosis and institution of parenteral antibiotic therapy. Proper management ultimately prevents blinding conditions in neonates as this is a common age group. Not many cases of GCC in the toddler age group have been reported worldwide. This case report emphasizes complete history taking which includes sexual abuse history, family history and complete examination which translates into early recognition and treatment thus preventing complications. Both sexual and non-sexual transmission should be kept into consideration. Even in the unusual age group the differential of gonococcal conjunctivitis should be kept under observation having a history of purulent discharge and redness especially in female children.

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