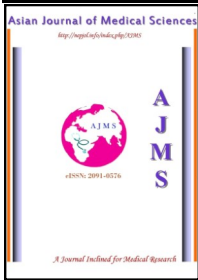


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Ophthalmia Neonatorum: A Letter to Editor

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Dear Editor,

New born babies are susceptible various types of infections including ocular infections, more commonly from the microbial flora of the mother's vagina. Neonatal Conjunctivitis, also known as Ophthalmia Neonatorum, is a form of bacterial conjunctivitis contracted by newborn during delivery. The baby's eyes get contaminated during passage through the birth canal. It is usually characterized by Pain and tenderness in eyeball, purulent discharge and swollen eyelids. Gonococcal Ophthalmia neonatorum, if not treated may lead to blindness in neonates. This can be prevented by addition a drop 1 percent silver nitrate solution to the eyes of new born.¹ It is a rare clinical entity in advanced countries, but relatively common in developing countries. Many bacteria and viruses can cause conjunctivitis in the neonates. Two most feared causes are *Neisseria gonorrhoeae* and *Chlamydia trachomatis* acquired from birth canal during delivery. Incidence of Ophthalmia Neonatorum is about 3.1 per 1000 live births² although this varies according to the socioeconomic status of the area. There is high rate of transmission from infected mother to infant - up to 50% in the absence of prophylaxis.³ The frequency of Ophthalmia neonatorum depends on the prevalence of maternal genital infection, with the infecting agents and on the frequency with which prophylactic agents are applied to the eyes of newborns.

We present four cases of gonococcal Ophthalmia Neonatorum in neonates from mid-western Nepal. Four different cases Gonococcal Ophthalmia neonatorum were diagnosed at Manipal Teaching Hospital, Pokhara, Nepal between the periods of 2007-2010. All these

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babies were delivered at various villages of remote areas of Western Nepal. Common clinical presentations among all the babies were swelling, sticking of eyelids with purulent discharge, and redness of eyes.



Fig-1: Mucopurulent conjunctivitis

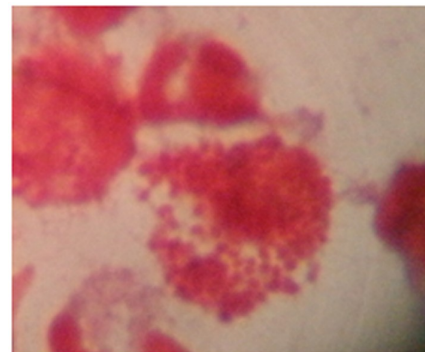


Fig-2: Gram stain of pus discharge reveals pus cells with intracellular Gram negative diplococci

After examination at Ophthalmology department, pus samples were collected on sterile cotton swabs and sent to the clinical Microbiology Laboratory for Gram stain and culture. Gram stained smear of pus revealed plenty of polymorphonuclear leucocytes along with intracellular Gram negative diplococci. Specimen was inoculated on chocolate agar and incubated at 37° C for 24 hours under 10% CO₂ inside a candle jar. Isolates were identified based on colony morphology, Gram

staining, oxidase test, and rapid carbohydrate utilization test. Antibiotic sensitivity test was done on chocolate agar by Kirby-Bauer disc diffusion method. All isolates of *N. gonorrhoeae* were sensitive to Ceftriaxone (100%), and 50% were resistant to penicillin and tetracycline. *Neisseria gonorrhoeae* was also isolated from cervical swab of mothers. Antibiogram of isolates was similar.

Traditionally, 2% silver nitrate ophthalmic solution was used for prevention of Ophthalmia Neonatorum but more recently, there have been advocates of the additional application of 2.5% povidone-iodine ophthalmic solution.⁴ The second approach of prevention consists of antenatal screening. Ophthalmia Neonatorum can be prevented by screening pregnant women for genital infection, particularly those at high risk for disease. Women with culture positive infections and their partners require adequate systemic treatment, with follow-up throughout pregnancy and delivery. However, this approach may not be cost effective in low incidence regions.

In order to eliminate childhood blindness due to Ophthalmia Neonatorum, an interdisciplinary effort is required which involve gynecologists, neonatologists, ophthalmologists, and a trained microbiologist. The neonates born to infected mothers or from the areas with a high prevalence of sexually transmitted diseases with limited treatment facility are at higher risk. All primary health care workers should be educated about the cause, prevention, and treatment of Ophthalmia Neonatorum. With increased awareness of the disease and widespread use of appropriate prophylactic agent, the risk of blindness due to Ophthalmia Neonatorum can be minimized.

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