COMMENT

Ophthalmia Neonatorum Revisited

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ABSTRACT

The microbiology, epidemiology and pathophysiology of ophthalmia neonatorum are reviewed with special emphasis on its prevention and management in the developing world. Although prophylaxis should be mandatory, no single topical agent is effective to prevent the ocular complications of both *Neisseria gonorrhoea and Chlamydia trachomatis*. Where levels of resistance to tetracyclines are low, however, tetracycline eye ointment is permissible for ocular prophylaxis. Eye prophylaxis has a relatively low failure rate. Management of ophthalmia neonatorum should be syndromic and systemic. Contact tracing is an integral part of the management. (*Afr J Reprod Health* 1998; 2(1):81–86)

RÉSUMÉ

Etude de la conjonctivite gonococcique chez le nouveau-né. La conjonctivite gonococcique chez le nouveau-né, est ici étudiée dans ses dimensions microbiologiques, épidémiologiques et pathologiques avec un accent particulier sur la prévention et le traitement de cette maladie dans les pays en voie de développement. Bien que la prophylaxie devrait être obligatoire, aucun agent topique en particulier n'est efficace dans la prévention des complications occulaires dues à la Neisseria Gonorrhoeae (Blénnorragie Neisseria) et la Chlamydia Trachomaris (Trachomose Chlamydia). Cependant, dans les cas de faibles taux de résistance à la tétracycline, une pommade occulaire à la tétracycline peut alors être utilisée pour la prophylaxie occulaire. Le taux d'échec de la prophylaxie occulaire est rélativement faible. Le traitement de la conjonctivite gonococcique chez le nouveau-né doit être syndromique et systémique. La recherche de l'origine de l'infection fait partie intégrante du traitement. (*Rev Afr Santé Reprod* 1998;2(1):81–86)

KEY WORDS: *Ophthalmia neonatorum, chlamydia, neisseria gonorrhoea, eye prophylaxis, contact tracing, neonatal conjunctivitis*

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been erased by the eye prophylaxis.[5,8] From the parental point of view, eye prophylaxis carries a definite risk of losing an important indicator for contact tracing and early treatment of the mother. As mentioned earlier, roughly half of the cases of ON are caused by micro-organisms other than GC and/or CT; about half of them are due to coagulase-negative staphylococcus aureus. The same problem of resistance to anti-microbials of the latter is encountered as with GC.

Management of Ophthalmia Neonatorum

ON may have both ocular and systemic complications; therefore, it should be treated systemically.[5] Topical therapy alone is inadequate and has little efficacy for it is washed out by tears and eye rubbing.[16] In developed countries, with readily available diagnostic facilities, etiologic treatment may be considered. In developing countries, however, a syndromic approach is warranted. Ideally it should be close to 100 percent effective, administered in a single-dose, without the need for topical medicine.[17–18,26] This ideal, however, has not yet been reached since NG and CT have different susceptibilities to anti-microbials. With regard to single-dose therapy, this is possible for NG, but not for CT in infants. In adults, recent data[31] have shown the efficacy of a single-dose of azithromycin with CT infections; this might not be applicable to ON since azithromycin is not to be given before the age of one year.[32] For these reasons the WHO recommends a two-step approach for ON: treat GCON — review after 3 days — if not improved treat for CNO.[26]

The choice of anti-microbials to treat ON is limited. The WHO[26] recommends a single dose of ceftriaxone (50 mg/kg, maximum 125 mg), kanamycin or spectinomycin (25 mg/kg maximum 75 mg) intramuscular injection for GCON, and erythromycin suspension (50 mg/kg in four divided doses for 2 weeks) for NCO.

Prevention of Ophthalmia Neonatorum by Screening in Pregnancy

In view of the high incidence of asymptomatic pregnant carriers of STD pathogens, the question of screening is worth considering. The answer is closely linked to the incidence of carriage, the incidence of ophthalmia neonatorum, the availability of diagnostic facilities, the cost and availability of anti-microbials.

A recent study from Martinique has shown that the cost of screening for CT was 50 times the cost of treatment of a single case.[33] The theoretical cost of screening and treatment of pregnant carriers should, however, be balanced against the cost of treating puerperal sepsis as well as of the implications of the high incidence of prematurity related to the condition. In areas of high syphilis endemicity, it may be worthwhile to screen antenatal women with positive syphilis serology for NG and CT. It is striking that the prevalence of NG in antenatal women reported from South Africa[13] is close to the overall incidence of reactive syphilis serology in pregnant women in the country.

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