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Opinion Article

The Lingering Problem: Why Neonatal Conjunctivitis Remains a Global Conc

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DESCRIPTION

Neonatal conjunctivitis, or ophthalmia neonatorum, remains one of the most persistent and preventable infections affecting newborns globally. Despite significant advancements in maternal health, improved access to antibiotics, and the widespread adoption of prophylactic eye medications, the condition continues to challenge public health systems particularly in low- and middle-income countries. Defined as conjunctival inflammation occurring within the first 28 days of life, neonatal conjunctivitis represents a complex public health issue shaped by gaps in maternal screening, socioeconomic inequities, limited access to quality healthcare, and persistent challenges in hygiene and infection control.

What makes neonatal conjunctivitis especially concerning is the paradox that surrounds it: it is largely preventable, yet it continues to affect thousands of newborns annually, leading in severe cases to corneal scarring, blindness, and systemic infection. Although various countries have made substantial progress in reducing its incidence, the persistence of Sexually Transmitted Infections (STIs), inadequate prenatal services, and inconsistent implementation of prophylaxis protocols contribute to its lingering global burden.

This commentary aims to explore the multifactorial reasons behind the continued prevalence of neonatal conjunctivitis, highlighting the interplay of medical, social, and systemic factors. By examining the barriers to prevention and the limitations of current approaches, the discussion underscores the urgent need for renewed global commitment, improved maternal care, and strengthened public health interventions.

The persistence of neonatal conjunctivitis worldwide can be traced to a combination of maternal health gaps, inconsistent prophylaxis practices, socioeconomic inequities, and systemic limitations in healthcare delivery. One major factor is the high prevalence of undiagnosed maternal infections, particularly *Chlamydia trachomatis* and *Neisseria gonorrhoeae*, which remain asymptomatic in many women and therefore pass unnoticed during pregnancy. Without routine prenatal screening, these infections continue to be transmitted during childbirth, leading to severe forms of neonatal conjunctivitis that could otherwise be prevented. Compounding this issue is the inconsistent availability and application of prophylactic eye medications. While erythromycin ointment remains the recommended agent in many regions, shortages and limited access often force healthcare providers to substitute less effective alternatives or forgo prophylaxis altogether. In many low-resource settings, a significant proportion of births occur outside medical institutions, where trained personnel, sterile conditions, and essential medications may not be available, further increasing the risk of neonatal eye infections.

Another major contributor is the global inequity in maternal care services. In numerous countries, antenatal visits are infrequent, STI screening is not integrated into routine prenatal care, and health education for expectant mothers remains minimal. Socioeconomic barriers such as poverty, limited transportation, lack of maternal literacy, and cultural beliefs significantly hinder access to timely and appropriate care. This leads to a cycle in which preventable infections go untreated, and newborns continue to present with conjunctivitis. Additionally, rising global rates of sexually transmitted infections, coupled with increasing antimicrobial resistance particularly in gonococcal strains complicate prevention and treatment efforts. Even in well-resourced healthcare systems, missed diagnoses, incomplete treatment of maternal infections, and lapses in prophylaxis allow preventable cases of neonatal conjunctivitis to persist.

Diagnostic delays also play a significant role in the continued burden of neonatal conjunctivitis. Parents and even frontline healthcare workers may misinterpret early symptoms as mild irritation or normal newborn discharge, which leads to delayed intervention. In many communities, newborns do not receive postnatal follow-up within the critical first few days, making early detection difficult. Without prompt diagnosis and targeted treatment, infections can progress rapidly, increasing the risk of complications such as corneal ulceration, conjunctival scarring, and even blindness. The overall persistence of neonatal conjunctivitis therefore reflects a broader public health challenge rooted in inequities, gaps in maternal care, inconsistent implementation of preventive strategies, and the evolving landscape of infectious diseases. Addressing these underlying

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issues is essential to reducing the global burden of this preventable condition.

Neonatal conjunctivitis remains a persistent global health concern despite well-established preventive strategies, and its continued prevalence highlights the complex interplay between biological, social, and systemic barriers. At the biological level, the condition arises from exposure to infectious agents-most commonly Neisseria gonorrhoeae, Chlamydia trachomatis, herpes simplex virus, or various bacteria-during passage through the birth canal. While the mechanisms of transmission are well understood, inconsistent maternal screening and limited access to prenatal care allow many infections to go undetected, leaving newborns vulnerable. This challenge is particularly evident in low-resource regions, where funding constraints, cultural barriers, and shortages of trained healthcare personnel hinder comprehensive reproductive health services. Even when prophylactic eye treatments are available, supply-chain disruptions and inconsistent implementation contribute to gaps in coverage. Socioeconomic factors further exacerbate the problem, as marginalized communities often lack health literacy, leading to delayed recognition of symptoms or reliance on traditional remedies instead of seeking timely medical care. Another factor sustaining the global burden is the growing antimicrobial resistance among pathogens, which decreases the effectiveness of standard treatments and calls for updated management guidelines and improved diagnostics. Disparities between high-income and low-income regions also play a significant role, with wealthier nations benefiting from routine maternal STI screening, universal prophylaxis, and robust healthcare infrastructures, while low-income countries struggle with competing public health priorities such as malnutrition and infectious diseases. These systemic inequalities underscore the complexity of eliminating neonatal conjunctivitis globally. Ultimately, the persistence of this preventable condition reflects a broader need for coordinated international strategies that strengthen maternal care, improve access to diagnostics and antibiotics, address antimicrobial resistance, and promote community-level education. Without addressing these interconnected factors, neonatal conjunctivitis will continue to pose an avoidable threat to infant vision and overall well-being.

CONCLUSION

Neonatal conjunctivitis remains a global concern because it embodies a complex intersection of biological, social, and systemic factors. Despite being largely preventable, its continued presence highlights failures in healthcare delivery, maternal screening, resource distribution, and public health implementation.

Ultimately, the solution to neonatal conjunctivitis requires a multidimensional approach that addresses both medical and societal determinants. Strengthening maternal healthcare systems, expanding access to STI screening, improving sanitation, ensuring consistent prophylaxis, training healthcare personnel, and increasing parental awareness are all critical steps toward reducing its burden.

The lingering problem of neonatal conjunctivitis is not a failure of knowledge but a failure of implementation. With sustained global commitment and equitable healthcare access, neonatal conjunctivitis can be drastically reduced moving closer to a world where preventable eye infections no longer threaten the vision or health of newborns.