

Purulent Gonococcal Urethritis in the Male: Case Report

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ABSTRACT

Background: Gonococcal urethritis is of global concern and particularly in Sub-Saharan Africa where sexually transmitted infections (STIs) are a public health problem.

Case: A 32 year old male consulted for dysuria and purulent urethral discharge following sexual intercourse with an occasional partner. The biological work-up revealed nothing but *Neisseria gonorrhoeae*. He received a single intramuscular dose of ceftriaxone 250 mg which was followed by a good clinical response.

Conclusion: We recommend health policy makers to intensify primary prevention, subsidise the use of multiplex polymerase chain reaction testing for *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Mycoplasma hominis*, *Ureaplasma urealyticum* and *Trichomonas vaginalis*, for the management of cases of purulent gonococcal urethritis and for screening in asymptomatic cases.

Keywords: Urethral discharge, Gonococcal urethritis, *Neisseria gonorrhoeae*, Sexually transmitted infections

INTRODUCTION

Neisseria gonorrhoeae (NG) infection is pandemic. On the other hand, it is difficult to give a precise picture of its prevalence, let alone its global impact, because of the low diagnostic and reporting capacity in some countries, particularly in sub-Saharan Africa. In 2008 WHO estimated the global incidence of NG infection at 106 million cases, an increase of 21% since 2005; Africa is one of the areas of high incidence [1]. The prevalence of NG in pregnancy ranges from 1.5% in West and Central Africa to 4.9% in Eastern and Southern Africa [2], exposing the newborn to purulent conjunctivitis (**Figure 1**). In Cameroon NG is the main cause of purulent urethritis in men, whose complications are mainly urethral stenosis and infertility [3].



Figure 1. Purulent gonococcal conjunctivitis in a neonate.

By presenting this clinical case in our environment where hepatitis B infections, hepatitis C, HIV are public health

problems, and where co-infections are common [4], we would like to draw the attention of practitioners and health policy makers to the need to respect the current protocol for the management of purulent gonococcal urethritis, taking into account the existence of asymptomatic cases [5].

CASE

This is a 32 year old patient, who had consulted for dysuria and purulent urethral discharge occurred 3 days after having sex with an occasional partner (**Figure 2**). Direct examination of pus in the bacteriology laboratory of the

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Douala General Hospital (Cameroon) identified Gram-negative diplococci in intracellular coffee beans. A single intramuscular dose of 250 mg of ceftriaxone was given to him for suspicion of NG pending the results of the culture on Polyvitex* chocolate medium that had isolated *Neisseria gonorrhoeae* colonies. 24 h after treatment we observed a good clinical response. In order to eliminate co-infections *Trichomonas vaginalis* was absent in direct examination, the search for *Chlamydia trachomatis* by Polymerase Chain Reaction (PCR) on urethral discharge was negative and the screening tests for other STIs such as: HIV, hepatitis B, VDRL/TPHA, *Mycoplasma hominis*, *Mycoplasma genitalium* and *Ureaplasma urealyticum* were negative. His sexual partners were taken care of; we had prescribed vaccination against hepatitis B.



Figure 2. Purulent gonococcal urethritis.

DISCUSSION

Gonococcal urethritis is part of the STIs that currently constitute a public health problem, despite the means taken for many decades now in primary prevention and curative treatment especially in our setting where self-medication, roadside drugs and antibiotic resistances remain challenges to be met [6,7]. The other challenges in sub-Saharan setting are that of inadequate treatment by native doctors, wrong information concerning the disease from some media, low level of education mainly in remote areas and in some pouch of the population living in town

The case we are presenting is that of the typical presentation of an acute urethritis caused by NG, whose management respects the current recommendations on purulent urethritis, that is; biological confirmation of the diagnosis, the search for potential co-infections, the management of sexual partner or partners, the choice of an effective antibiotic, administered at appropriate doses and which is not subjected to resistances and the consideration of the pandemic background of HIV and HBV infections. However, there exist cases of asymptomatic gonococcal urethritis which are not treated, thus exposing to infertility and contamination of

sexual partners not only by NG, but by other potential bacteria (*Chlamydia trachomatis*, *Mycoplasma hominis*, *Ureaplasma urealyticum*, *Mycoplasma genitalium*), parasite (*Trichomonas vaginalis*) and viruses (VIH, VHB) in case of co-infection [8,9]. These, together with antibiotic resistances put in question the syndromic treatment of gonococcal urethritis [6,10,11]. If it is true that this patient had enough financial power to take on himself the cost of his treatment, 180 US Dollars, it is not always the case in our setting where the purchasing power of the population is low (guaranteed minimum wage=66 US Dollars) and where social security is nearly absent.

Apart from *Chlamydia* which we searched by PCR, identification of NG was done by culture, that of *Mycoplasma* by the Mycofast* technique and *Trichomonas vaginalis* by direct examination. Whereas in our setting, the popularization of the PCR for biological diagnosis of not only NG but of other germs causing urethral discharge and even potential co-infections, could contribute in improving the diagnosis and management of symptomatic and asymptomatic gonococcal urethritis, as well as fighting against resistances.

CONCLUSION

In addition to intensifying current sensitization strategies of populations at risk of STIs, the state should bear the cost of the current treatment protocols for gonococcal urethritis in our setting and popularize the multiplex polymerase chain reaction testing for NG, *Chlamydia trachomatis*, *Mycoplasma hominis*, *Mycoplasma genitalium*, *Ureaplasma urealyticum* and *Trichomonas vaginalis*, especially in the management of acute cases and screening of asymptomatic gonococcal urethritis.

DECLARATIONS

Ethics approval and consent to participate

Ethical approval was obtained from Douala General Hospital for publication of this case report.

Consent for publication

Written informed consent was obtained from the patients for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Availability of data and material

The datasets (medical file of the patient) is available in Douala General Hospital on reasonable request.

Competing interests

“The authors declare that they have no competing interests” in this section.

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Author's contributions

All authors participated in the design and editing of the manuscript, all authors approved the final version of the manuscript.

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