MT*b*

BULLETIN of the NETHERLANDS SOCIETY for TROPICAL MEDICINE and INTERNATIONAL HEALTH

PHOTO HANNEKE DE VRIES

Nº 02 / June 2013 – volume 51

SEXUAL HEALTH IN A TROPICAL ENVIRONMENT

RESEARCH, TREATMENT AND CURRENT ISSUES

CONTENT

Editorial 2

Research Papers
Reducing HIV incidence and prevalence **3**

Conferences & Symposia 5

Research Papers
Confronting STI in Kenya: Linking key populations to care **6**

Practical Papers
Sexually Transmitted Infections **8**

Debate
Sexual health, sexual education and gender equality in Africa **10**

Engaging men in the pursuit of sexual and reproductive health **12**

Thesis
Ideas and practices of Zimbabwean women in preventing Sexually Transmitted Infections **14**

Consult Online
Sierra Leone **16**

Case Report
Tanzania **18**

THE PLEASURE-POSITIVE APPROACH TO SEXUAL HEALTH

Last April The Guardian published an article by Doortje Braeken with the title 'Let's be more open about the joy of sex' (guardian.co.uk). Doortje is senior adviser on adolescents and young people at the Central Office of the International Planned Parenthood Federation (IPPF) in London (ippf.org). She wrote: 'To work in sexual and reproductive health and rights is to be drip-fed a diet of warnings, doom-laden data on violence, population and epidemics; no wonder we have forgotten a central truth about sex – namely that it is pleasurable'.

It is an interesting point. Especially when she frames this within the current process to develop a set of Sustainable Development Goals (SDGs), based on the wellknown Millennium Development Goals (MDGs). This discussion challenges all of us to re-examine the issue of sexual health and rights as the key to alleviating poverty and empowering women. The IPPF is already beginning to reframe the debate on sexual rights and health in terms of pleasure and confidence. I recommend reading the 2020-vision of IPPF (ippf.org).

In this issue the pleasure-positive approach will be difficult to spot. Iris Shiripinda shares with us the current difficult situation in Zimbabwe. Life on the ground, with the lack of a woman and child friendly legal and social welfare system and the gender imbalance, shows us the darker side of Sexual Health, but with some sparks of hope on how to empower women.

From his experience Steven Smits focuses on sexual education and the need for small-scale projects. Esther Jurgens emphasizes the importance of engaging men in sexual and reproductive health, which seems to be a long forgotten territory; this is illustrated by the example of a recently launched programme on how to include men in SRH.

Janneke van de Wijgert, Professor at the Department of Clinical Infection, Microbiology and Immunology of the Institute of Infection and Global Health in Liverpool provides us with the current situation on reducing HIV incidence and prevalence. Koos Sanders of the University Medical Center in Utrecht provides a concise update on clinical aspects of Sexually Transmitted Infections (STIs).

The next issue of MT will include insights on 'Urban Health', that is also the theme of the NVTG Annual Symposium which will take place in October at the Royal Tropical Institute. I am confident that many readers would like to contribute to this exploration of the many dimensions and challenges of staying in good health in a rapidly expanding global urban environment.

HANS WENDTE
CHIEF EDITOR

TO WORK IN SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS IS TO BE DRIP-FED A DIET OF WARNINGS, DOOM-LADEN DATA ON VIOLENCE, POPULATION AND EPIDEMICS; NO WONDER WE HAVE FORGOTTEN A CENTRAL TRUTH ABOUT SEX – NAMELY THAT IT IS PLEASURABLE

-DOORTJE BRAEKEN-

Reducing HIV incidence and prevalence: Where are we and where are we going?

In 2011, 6,850 new HIV infections occurred every day, even though several efficacious HIV prevention options are now available: male and female condoms, voluntary medical male circumcision, timely management of other sexually transmitted infections (STI), and more than 20 antiretroviral drugs in 6 different drug classes [1]. The latter can be used to prevent mother to child transmission, for oral pre- and post-exposure prophylaxis in those who are not infected (see further), and to suppress HIV viral load in those already infected for treatment as well as prevention of onward transmission.

CURRENT PROGRAMMES

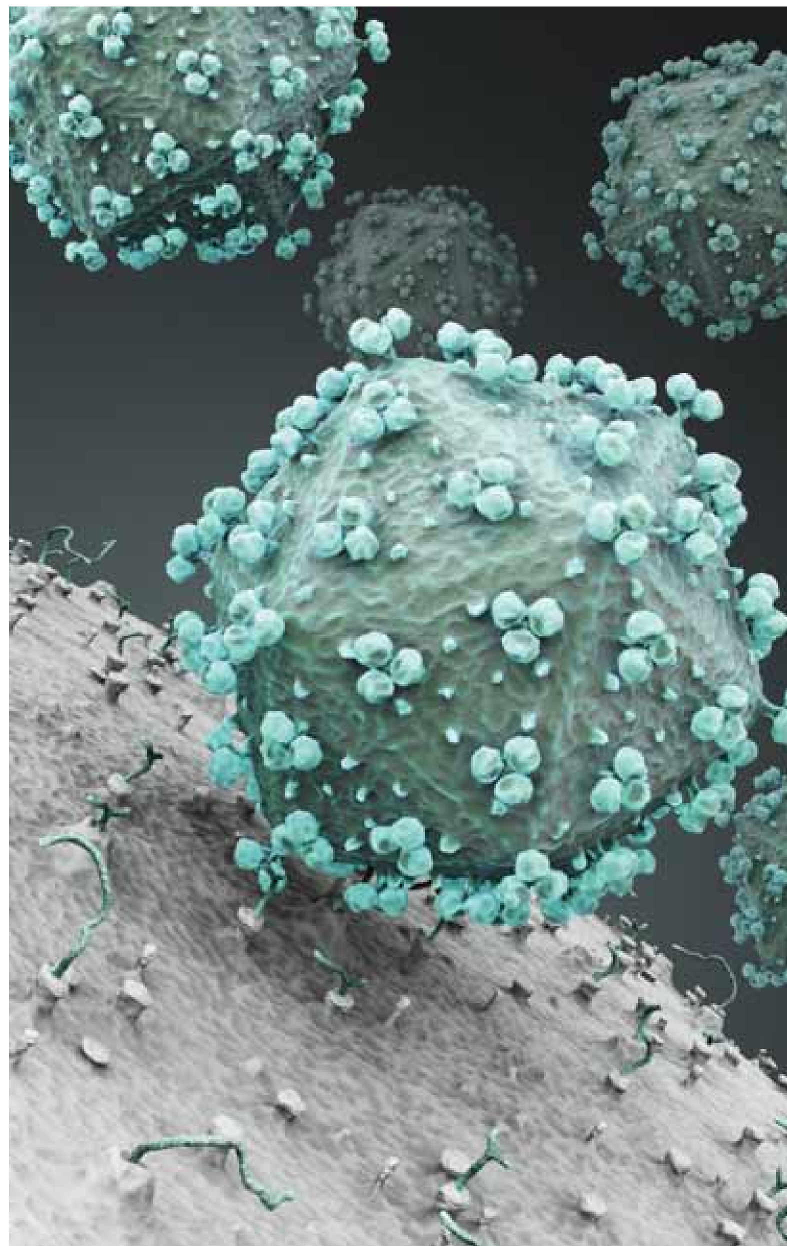
The good news is that these HIV prevention strategies are working. HIV incidence peaked in 1996, with 3.5 million new HIV infections in that year, and has declined to 2.5 million in 2011 [1]. The bad news is that they have not succeeded in decreasing HIV prevalence: HIV prevalence increased steadily from 7 million in 1990 to 34 million at the end of 2011 [1]. The reason for this is that, in addition to 2.5 million new cases per year, HIV patients are surviving longer due to improved access to combination antiretroviral therapy (cART). Eight million patients were receiving cART by the end of 2011, which is 54% of those eligible for cART according to the current World Health Organization guidelines. The vast majority of them live in low- and middle-income countries [1]. It may be possible to reduce HIV incidence even further by improving access to existing prevention strategies and cART, and by removing structural barriers prohibiting evidence-based HIV prevention programmes. However, health systems in low- and middle-income countries and international budgets are struggling to cope with current programmes, and structural barriers are not easily removed. Furthermore, not all groups at risk currently have access to prevention technologies that are suitable for them. New HIV prevention technologies are therefore still needed.

PRE-EXPOSURE PROPHYLAXIS

The latest addition to the HIV prevention mix is daily oral pre-exposure prophylaxis (PrEP). In 2010 and 2011, three pivotal randomized controlled trials (RCTs) showed a reduction of HIV incidence in participants who had received the drug Truvada (tenofovir disoproxil fumarate plus emtricitabine) for daily oral PrEP: 44% in men who have sex with men (MSM) in the Americas, Thailand and South Africa (iPrEx trial), 63% in heterosexual men and women in Botswana (CDC TDF2 trial), and 73% in HIV discordant couples in several African countries (Partners PrEP trial) (reviewed in 2). Subsequently, in 2012, the United States (US) Food and Drug Administration approved Truvada for oral PrEP, and the US Centers for Disease Control and Prevention issued interim guidance for clinicians interested in prescribing PrEP [2]. The guidance stipulates that PrEP should be targeted to those confirmed to be HIV-negative (and not pregnant) but at very high risk of acquiring HIV, should always be delivered as part of a comprehensive prevention package, and should be monitored closely (i.e. regular HIV, STI and toxicity testing, and adherence evaluation). Demonstration projects have now been initiated in the US and the United Kingdom to evaluate if PrEP will also work in real-world situations. Furthermore, studies to assess the efficacy of intermittent PrEP with Truvada, and of PrEP with other antiretroviral drugs (including the injectable drug TMC278), are ongoing.

HIV virus

PHOTO SHUTTERSTOCK



While most Truvada PrEP trials to date have been successful, the two trials that enrolled young African women without their male sex partner(s) were not [3, 4]. The FemPrEP and VOICE trials were prematurely terminated due to futility in 2011 and 2013, respectively. Pharmacokinetic testing of drug levels and other trial data suggest that few trial participants used the products as directed. This low adherence explains the lack of benefit and is consistent with data from the successful PrEP trials that found a correlation between higher levels of adherence and protection from HIV. Perhaps the most disturbing finding of the FemPrEP and VOICE trials was the very high HIV incidence in these young women (5 per 100 person-years of follow-up or higher) despite the fact that they were offered several HIV prevention services in an RCT setting.

MICROBICIDES

While daily oral PrEP is a welcome addition to the HIV prevention toolbox in some very high risk populations, it is clearly not suitable for roll-out in many other populations. This is why research on other delivery mechanisms of (lower doses of) antiretroviral drugs is continuing, such as vaginal rings and vaginal and rectal gels. These so-called vaginal and rectal microbicides allow for local dosing at the HIV portal of entry instead of systemic dosing, which may increase efficacy and reduce toxicity [5]. Furthermore, the efficacy of vaginal rings is likely to be less dependent on user-adherence because the rings can stay in place for at least one month. Vaginal microbicide development has a long history. Six different products (none of them antiretroviral drugs) were tried in efficacy trials but failed [6]. The breakthrough came in 2010, when the South African CAPRISA 004 trial showed that 1% tenofovir vaginal gel (2 doses within 12 hours before and 12 hours after sex) reduced HIV incidence by 50% during 12 months of gel use [7]. Overall adherence in the trial was poor, and efficacy increased with higher levels of adherence (as assessed by vaginal drug levels). Unfortunately, hopes were tempered by the negative results of the VOICE trial. The VOICE trial included a 1% tenofovir vaginal gel arm with daily dosing in addition to the above-mentioned oral PrEP arms [4]. This vaginal gel arm was also terminated prematurely due to futility. At the moment, the results of three pivotal RCTs are anxiously awaited: the FACTS 001 trial in South Africa (same product and dosing as CAPRISA 004), and two trials of a vaginal ring containing the non-nucleoside reverse transcriptase inhibitor dapivirine (the Ring and ASPIRE trials). All three RCTs are being conducted in young African women and results are expected in 2014 and 2015.

VACCIN

Perhaps the only way to reduce HIV incidence and prevalence significantly is to develop a highly efficacious vaccine and/or a cure. Many vaccines have been developed and tested but with disappointing results thus far. Only one RCT (the RV 144 trial) has shown a statistically significant but modest (31%) reduction in HIV incidence [8]. This RCT was conducted in Thailand between 2003 and 2009 by the US Military HIV Research Program (MHRP). Participants were primed 4 times with the ALVAC-HIV vaccine (a canary-pox vector containing three genetically engineered HIV genes) and boosted twice with the AIDSVAX B/E vaccine (genetically engineered gp120). MHRP is currently trying to improve the immunogenicity of these vaccines, and is preparing for another large trial based on the RV 144 vaccine strategy in Thailand and South Africa. Recent experiences with adenovirus-based HIV vaccines (the STEP/Phambili and HVTN 505 trials) have been worrisome: not only were the vaccines not efficacious, they also showed trends towards harm [9-11]. While the vaccine itself cannot cause HIV infection, it is plausible that vaccination recruits and activates target cells for HIV at mucosal surfaces. If the vaccine does not elicit strong protective immune response directed at HIV (such as neutralizing antibodies) at the same time, HIV entry could be facilitated instead of blocked [12]. In the STEP trial, vaccinated MSM with pre-existing antibodies to adenovirus as well as uncircumcised vaccinated MSM had statistically significantly higher rates of HIV infection than circumcised MSM without adenovirus antibodies or unvaccinated controls (the latter two groups did not differ from one another); this effect waned after the first 18 months of follow-up [10]. The HVTN 505 trial, however, was conducted in circumcised MSM without pre-existing adenovirus immunity, and also showed a trend towards harm [11]. Vaccine researchers therefore have to go back to the drawing board once again. One glimmer of hope is the recent discovery of a number of highly potent neutralizing antibodies, which might be incorporated into future vaccine strategies [13].

A CURE FOR HIV

Research on a cure for HIV gained attention after three observations were made suggesting that a cure might be feasible: 'the Berlin Patient' (free of replicable HIV since a bone marrow transplant from a donor whose immune system was resistant to HIV due to a delta 32 mutation in the gene coding for the CCR5 co-receptor), 'the Mississippi Baby' (treated with cART within hours of infection for 18 months and now free of replicable HIV) and 'the Visconti Cohort' (14 HIV patients in France treated with cART within 10 weeks of infection for a median of 37 months who had an HIV viral load of <400 copies/ml in the absence of cART for a median of 89 months) [14]. In all of these cases, the patients were functionally cured (HIV is most likely still present in reservoirs but is controlled without cART) as opposed to a sterilizing cure (no HIV genetic material can be found in the entire body). A cure for HIV will probably consist of a combination of interventions (such as antiretroviral drugs, vaccines and/or gene therapy) to not only kill accessible free virus and virus-infected cells but also hard-to-reach reservoirs. While this area of research is gathering speed, a cure is still years away. In the mean time, the world should continue to focus on improving access to existing HIV prevention strategies and cART.

JANNEKE VAN DE WIJGERT, PHD
J.VANDEWIJGERT@LIV.AC.UK
PROFESSOR AT THE DEPARTMENT OF CLINICAL INFECTION, MICROBIOLOGY AND IMMUNOLOGY OF THE INSTITUTE OF INFECTION AND GLOBAL HEALTH, LIVERPOOL

REFERENCES

1. UNAIDS. Global report: report on the global AIDS epidemic 2012. Geneva: UNAIDS. Available: http://www.unaids.org/en/resources/publications/2012/name,76121,en.asp. Accessed on 6 May 2013.
2. Smith DK, Thigpen MC, Nesheim SR, MD, et al. Interim guidance for clinicians considering the use of pre-exposure prophylaxis for the prevention of HIV infection in heterosexually-active adults. MMWR 2012; 61:586-9.
3. Van Damme L, Corneli A, Ahmet K, et al. Pre-exposure prophylaxis for HIV infection among African women. New Eng J Med 2012; 367:411-22.
4. Marrazzo J, Ramjee G, Nair G et al. Pre-exposure prophylaxis for HIV in women: Daily oral tenofovir, oral tenofovir/emtricitabine, or vaginal tenofovir gel in the VOICE study (MTN 003). 20th Conference on Retroviruses and Opportunistic Infections 2013, Atlanta, GA, US. Available at: http://www.retroconference.org/2013b/Abstracts/47951.htm. Accessed on 6 May 2013.
5. Rosenberg ZS, Devlin B. Future strategies in microbicide development. Best Practice & Research Clinical Obstetrics and Gynaecology 2012; 26:503–13.
6. Padian NS, McCoy SI, Balkus JE, et al. Weighing the gold in the gold-standard: challenges in HIV prevention research. AIDS 2010; 24:621-35.
7. Abdool Karim Q, Abdool Karim SS, Frohlich JA, et al. Effectiveness and safety of tenofovir gel, an antiretroviral microbicide, for the prevention of HIV infection in women. Science 2010; 329:1168-74.
8. Rerks-Ngarm S, Pitisuttithum P, Nitayaphan S, et al. Vaccination with ALVAC and AIDSVAX to prevent HIV-1 infection in Thailand. N Engl J Med 2009; 361:2209-20.
9. Buchbinder SP, Mehrotra DV, Duerr A, et al. Efficacy assessment of a cell-mediated immunity HIV-1 vaccine (the Step Study): a double-blind, randomised, placebo-controlled, test-of-concept trial. Lancet 2008; 372:1881-93.
10. Duerr A, Huang Y, Buchbinder SP, et al. Extended follow-up confirms early vaccine-enhanced risk of HIV acquisition and demonstrates waning effect over time among participants in a randomized trial of recombinant adenovirus HIV vaccine (Step Study). J Infect Dis 2012; 206:258-66.
11. National Institute of Allergy and Infectious Diseases (NIAID). Press release: NIH discontinues immunizations in HIV vaccine study. Available at: http://www.niaid.nih.gov/news/newsreleases/2013/Pages/HVTN505April2013.aspx. Accessed at 6 May 2013.
12. Tenbusch M, Ignatius R, Temchura V, et al. Risk of immunodeficiency virus infection may increase with vaccine-induced immune response. J Virol 2012; 86:10533-9.
13. Walker LM, Huber M, Doores KJ, et al. Broad neutralization coverage of HIV by multiple highly potent antibodies. Nature 2011; 477:466-70.
14. Katlama C, Deeks SG, Autran B, et al. Barriers to a cure for HIV: new ways to target and eradicate HIV-1 reservoirs. Lancet 2013; Mar 28 epub ahead of print.

Urban Health

SICK CITIES OR HEALTHY HABITATS

On the 16th of October 2013 the NVTG organizes its annual symposium at the Royal Tropical Institute in Amsterdam, in collaboration with Uniting Streams (US), Public Health Services of Amsterdam (GGD, Department Urban Public Health), KIT Development Policy & Practice and Tropical Doctors in Training (TROIE). The symposium '**Sick Cities or Healthy Habitats**' aims to untangle the complex interplay of factors affecting urban health, with a specific focus on urbanisation in LMIC. Together with renowned scientist in the field, we will identify knowledge gaps and propose the forthcoming research agenda. The day will conclude with the honouring of an innovative researcher with the Eijkman Medal, named after Nobel prize winner Prof Dr Eijkman who was among the first in the tropical medicine field to link (socially-determined) dietary factors and health. Members of the NVTG will receive more information in a separate flyer, also information can be found on the NVTG website.

Stichting Eijkman Medaillefonds

EIJKMAN MEDAL 2013

The Eijkman Medal Foundation was founded on 1 October 1923 in honour of Prof Dr C. Eijkman, Nobel Prize winner in the field of vitamin research. Later the foundation's purpose became the promotion of scientific research in the field of Tropical Medicine, by awarding Eijkman Medals to those who have contributed substantially in this field in the broadest sense of the word.

The board of the Eijkman Medal Foundation aims to award the Eijkman Medal again in 2013. The award ceremony will be held on Wednesday, 16 October 2013, at the Royal Tropical Institute in Amsterdam during the symposium of the Dutch Society for Tropical Medicine and International Health Care (www.nvtg.org) 'Sick cities or healthy habitats? Facing the health care challenges of global urbanization'.

The board of the Eijkman Medal Foundation invites you to nominate candidates. Forms can be found on the website (www.kit.nl/eijkman) or can be requested from the Secretary,
Prof. dr. P.R. Klatser, tel. 020-5665440,
fax. 020-6971841, e-mail: I.Struiksma@kit.nl

Deadline for submission of nominations to the Secretary is 15 August 2013.

ILLUSTRATION FROM VVU,AFYA & JUMUIA YAKO!

CONFRONTING STI IN KENYA: LINKING KEY POPULATIONS TO CARE

In Kenya, a recent TV advert promoting condom use was withdrawn after stirring sharp controversy [1]. The advert, sponsored by Kenya's National AIDS and STI Control Programme (NASCOP) portrays a woman discussing an extramarital affair with a friend who advises her to use condoms. The advert was launched after a recent national survey revealed that up to 30% of married couples in Kenya have concurrent partners, but that the majority of them do not use condoms [1]. According to WHO figures, sexually transmitted infections (STI) and their complications rank in the top five disease categories for which adults in limited-resource countries seek health care [2]. Although these statistics raise some fundamental questions, discussing STI in public is not done.

SELF-TREAT OF STI

Due to limited access to laboratory facilities, STI control programmes in restricted-resource settings have largely been dependent upon a syndromic approach to the management of symptomatic STI [3]. Yet the majority of patients who acquire an STI do not experience symptoms [4]. When patients do experience symptoms, as commonly in male urethritis, men often opt to 'self-treat' by buying medication directly from chemists or pharmacies. Chemists offer the advantage of long opening hours, accessibility and widespread localization. In addition, small pharmacies attract clients because of anonymity and a perceived lack of stigma associated with attending a chemist. Small pharmacies, however, are not trained to promote HIV testing among clients, or to refer patients who purchase medication for STI. Hence they lack clinical expertise and tend not to comply with national guidelines. This was illustrated in a recent study assessing STI treatment practices in pharmacies in Coastal Kenya: only in 10% of simulated visits of male clients buying treatment for *Chlamydia trachomatis* or *Neisseria gonorrhoeae*, the most frequent causes of male urethritis, the correct treatment was provided. That is, the recommended antibiotic at the recommended dosage and duration was sold[5]. While bacterial STI are important cofactors for HIV transmission, the same study also showed that HIV testing was only recommended in one in ten male simulated clients visiting the pharmacy to purchase STI treatment [5].

HIGH RISK POPULATIONS

Those who are most prone to become infected with an STI often belong to high risk populations such as female sex workers (FSW) or men who have sex with men (MSM). Engagement of these patients is the key to successful STI prevention programmes, but vulnerability and marginalization cause these men and women to avoid public health facilities. As a consequence, those who are most at risk are commonly hardest to reach. Kenya was among the first countries in sub-Saharan Africa (SSA) which, in Coastal Kenya, started screening and testing MSM and male sex workers for HIV-1 [6]. High risk MSM report both male and female partners and most of them participate in transactional sex. MSM who practice receptive anal intercourse have a very high risk of becoming HIV infected, in particular when they have sex with men exclusively (MSME), sex is unprotected, group sex is reported, or a symptomatic gonorrhoea infection was present in the six months before seroconversion [7].

CURRENT PRACTICE

The 2010 constitution of Kenya recognizes the right of all consumers to access health care services. In spite of this national right to care, homosexual acts under Kenyan law are punishable by up to 14 years of incarceration and, as a result, anal sex is a taboo subject. Conducting a sexual risk assessment, however, is paramount to diagnosing STI. Cohort studies of MSM and FSW showed that of the symptoms experienced around the time of HIV seroconversion, fever was most prominent [8, 9]. Yet strikingly, most patients who acquire HIV are treated for 'malaria' when seeking care for fever [9-11]. These findings illustrate the importance of considering other causes than malaria, such as STI or HIV, in patients seeking health care for fever, especially if they engage in high risk behaviour. In this context, a recent audit assessing current practice regarding the management of febrile adults visiting one of five clinics in Coastal Kenya showed that in none of the 66 reviewed clinical cases a sexual risk assessment had been conducted [12]. In a subsequent focus group discussion health care workers reported that they found it difficult to broach the topic of sexual risk behaviour and that they did not feel confident

questioning patients whether they had practised penile-vaginal or anal sex.

TRAINING

Perhaps unsurprisingly, health care workers in Kenya typically receive little or no training in understanding the health care needs of MSM and other key populations reporting anal sex. In 2012 an e-learning programme for health care workers focusing on MSM sexual risk practices, HIV prevention and health care needs of MSM was launched in four districts along the Kenyan coast (www.marps-africa.org). Re-assessment of 71 of the 74 participants regarding course knowledge and homoprejudice (using a 25-item homophobia scale) three months post-training showed not only an increase in knowledge relevant to clinical practice, but also a self-perceived improvement in capability to provide appropriate and nonjudgmental health services to MSM clients, as well as a 14% reduction in mean homophobia scale score [13].

SEXUALLY TRANSMITTED INFECTIONS AND THEIR COMPLICATIONS RANK IN THE TOP FIVE DISEASE CATEGORIES FOR WHICH ADULTS IN LIMITED-RESOURCE COUNTRIES SEEK HEALTH CARE

BARRIERS TO CARE

Availability of health services tailored to individuals engaging in high risk sexual behaviour, including anal sex, is likely to improve access to care. Currently the highest barriers to care are faced by MSM. Adherence and retention, presumably as a consequence, are generally poor in this group. In a recent analysis of challenges to antiretroviral therapy (ART) adherence in a cohort of most at risk populations in Coastal Kenya, participating MSM were less likely than FSW to have disclosed their HIV status, to have had ART counselling, or to have ever taken ART in the community prior to enrolment, indicating a low level of engagement with health services [14]. Other studies also suggest that MSM suffer from poor access to HIV-1 testing and prevention services, fear of health care seeking, and denial of care [15].

PUBLIC DEBATE

The past year was filled with optimism about the possibility to achieve what US Secretary of State Hillary Clinton has called 'an AIDS-free generation' [16]. However, without addressing STI as a major public health concern such optimism might prove premature. STI, whether symptomatic or asymptomatic, cannot be ignored. As of today at risk populations, MSM in particular, continue to be disproportionally affected and co-infection with two or more STI, including HIV, is common. These populations are key to the dynamics of the STI epidemic as well as the global HIV pandemic and, therefore, are key to the response to it.

Perhaps it is still too early to bring up extramarital affairs on national television, but at least the condom advert sparked widespread public debate. In terms of linking to care key populations and provision of sensitized health services, however, there is still much to be done.

HENRIEKE PRINS, MD MSC
HPRINS@KEMRI-WELLCOME.ORG
INTERNATIONAL AIDS VACCINE INITIATIVE (IAVI)
KEMRI-WELLCOME TRUST RESEARCH PROGRAMME, KILIFI, KENYA

EDUARD SANDERS, MD, PHD/ PUBLIC HEALTH PHYSICIAN AND EPIDEMIOLOGIST
ESANDERS@KILIFI.KEMRI-WELLCOME.ORG
KEMRI-WELLCOME TRUST RESEARCH PROGRAMME, KILIFI
AFFILIATED TO OXFORD UNIVERSITY

REFERENCES

Full list of references can be obtained from the authors.

1. British Broadcasting Corporation Africa. Kenya condom advert pulled after religious complaints. Available at: http://www.bbc.co.uk/news/world-africa-21859665. Accessed 13 April 2013.
2. World Health Organization. WHO Factsheet on Sexually Transmitted Infections 2011. Available at: http://www.who.int/mediacentre/factsheets/fs110/en/. Accessed 13 April 2013.
3. Meheus AZ. Practical approaches in developing nations. In: Holmes KK, Mardh PA, Sparling PF, Wiesner PJ, ed. Sexually transmitted diseases. New York, McGraw-Hill, 1983. 40 p.
4. Sanders EJ, Thiong'o AN, Okuku HS, et al. High prevalence of Chlamydia trachomatis and Neisseria gonorrhoeae infections among HIV-1 negative men who have sex with men in coastal Kenya. Sexually transmitted infections. 2010;86(6):440-1. Epub 2010/07/27.
5. Mugo PM, Duncan S, Mwaniki S, et al. Cross-sectional survey of treatment practices for urethritis at pharmacies, private clinics and government health facilities in coastal Kenya: many missed opportunities for HIV prevention. Sexually transmitted infections. 2013. Epub Publication in progress.
6. Sanders EJ, Graham SM, Okuku HS, et al. HIV-1 infection in high risk men who have sex with men in Mombasa, Kenya. AIDS. 2007;21(18):2513-20. Epub 2007/11/21.
7. Sanders EJ, Okuku HS, Smith AD, et al. High HIV-1 incidence, correlates of HIV-1 acquisition, and high viral loads following seroconversion among MSM. AIDS. 2013;27(3):437-46. Epub 2012/10/20.
8. Lavreys L, Thompson ML, Martin HL, et al. Primary human immunodeficiency virus type 1 infection: clinical manifestations among women in Mombasa, Kenya. Clinical infectious diseases : an official publication of the Infectious Diseases Society of America. 2000;30(3):486-90. Epub 2000/03/18.
9. Sanders EJ, Wahome E, Mwangome M, et al. Most adults seek urgent healthcare when acquiring HIV-1 and are frequently treated for malaria in coastal Kenya. AIDS. 2011;25(9):1219-24. Epub 2011/04/21.
10. Bebell LM, Pilcher CD, Dorsey G, et al. Acute HIV-1 infection is highly prevalent in Ugandan adults with suspected malaria. AIDS. 2010;24(12):1945-52. Epub 2010/06/15.
11. Serna-Bolea C, Munoz J, Almeida JM, et al. High prevalence of symptomatic acute HIV infection in an outpatient ward in southern Mozambique: identification and follow-up. AIDS. 2010;24(4):603-8. Epub 2009/12/19.
12. Prins HAB, Mugo PM, Sanders EJ. Diagnosing acute HIV infection in adults seeking care for fever: a literature-guided review of current clinical practice. 2013. Manuscript in writing.
13. Elst EM van der, Gichuru E, Omar A, et al. E-learning supported by group discussions on MSM behaviour in Africa increased knowledge and reduced homoprejudice among health care providers in Coastal Kenya. Seventh IAS Conference on HIV Pathogenesis, Treatment and Prevention; 30 June 2013 - 3 July 2013; Kuala Lumpur, Malaysia 2013. Poster MOPE200.
14. Graham SM, Mugo PM, Gichuru, et al. Adherence to Antiretroviral Therapy and Clinical Outcomes Among Young Adults Reporting High-Risk Sexual Behavior, Including Men Who Have Sex with Men, in Coastal Kenya. AIDS and behavior. 2013. Epub 2013/03/16.

PHOTOS SHUTTERSTOCK

Sexually Transmitted Infections

Sexually transmitted Infections (STI) are common infections worldwide but the majority of these infections and complications occur in tropical regions of the world. There are various reasons for this such as a fragile health care infrastructure to diagnose and treat these infections; the presence of marginalized populations such as commercial sex workers, illicit drug and alcohol users, core-group transmitters such as military personnel, police workers or truck drivers, and the weak position of women in society.

Human Immunodeficiency Virus (HIV) infection is mainly transmitted through sexual contact and in the presence of traditional STI, such as gonorrhea and syphilis, the risk of HIV transmission is increased approximately threefold [1]. The improvement of STI control not only reduces the morbidity and mortality caused by these traditional STI but also reduces the incidence of HIV infections [2].

PREVENTION

The transmission of STI may be prevented by abstaining from sexual activity or being faithful to an uninfected sexual partner. The male condom is also highly effective against transmission of STI when used consistently and correctly. They are cheap, often provided for free, and readily available but unfortunately only used in very limited numbers by the general population and high-risk groups, e.g. commercial sex workers frequently fail to negotiate these safe sex measures in male-dominated sexual relations.

We are in dire need of preventive measures that are controlled by women and in this regard new developments are taking place. Tenofovir vaginal gel applied by women, before and after the heterosexual contact, has shown a 40% reduction in newly acquired HIV infection between users and controls but unfortunately this result has not yet been repeated in other studies [3]. Furthermore, there is a United Nations programme underway reintroducing the female condom with two brands already on the market and two different models getting approval in the year 2013. This variety of choice hopefully will make the price go down and make them affordable to the public at large [4].

DIAGNOSIS AND TREATMENT

STI are managed using syndromic case management in which, after history taking and physical examination, various clinical syndromes are discerned that may be caused by a restricted number of STI and that are managed according to locally adapted treatment guidelines, partner notification and follow-up [5].

The syndrome of genital ulcer is usually caused by syphilis or chancroid but during the last decades most cases in developing countries are now due to genital herpes. A syphilis ulcer may be painless but is often quite painful especially when secondary bacterial infection has occurred. The border and bottom of the ulcer are indurated and it is often accompanied by bilateral inguinal lymphadenopathy. The ulcer is self-limiting and signs and symptoms of secondary syphilis with various types of skin rashes and condylomata lata may follow. Chancroid ulcers can be multiple with irregular borders and are often quite painful. When inguinal adenopathy is present this may progress towards abscess formation i.e. a bubo. The latter is managed with incision and drainage. The history of the presence of small blisters preceding the grouped shallow ulcers is highly suggestive of genital herpes. Recent studies of genital herpes in young adults in the United States have shown that the majority is now caused by Herpes Simplex Virus type 1 and this is due to an increase of oro-genital sexual practices [6]. In the presence of HIV co-infection the clinical characteristics of these STI may change, often leading to an increase in ulcer size and a more protracted course.

CONGENITAL SYPHILIS

Recent studies estimate that in 2008, 1.4 million pregnant women worldwide were infected with syphilis, 80% of whom had attended antenatal care services. The percentage of pregnant women tested for syphilis and adequately treated, ranges from 30% for Africa and the Mediterranean region to 70% for Europe. In 2008, syphilis infections in pregnant women caused approximately 215,000 stillbirths, 90,000 neonatal deaths, 65,000 preterm or low birth weight babies, and 150,000 babies with congenital infections [7].

Therefore, it is important to realize that despite antenatal care programmes, a fairly sensitive point-of-care syphilis test, and effective treatment options, syphilis continues to be an important cause of adverse outcomes of pregnancy, including considerable numbers of perinatal deaths and disabilities.

Urethral discharge in men is mainly caused by *Neisseria gonorrhoeae* and *Chlamydia trachomatis* and, with the former, the discharge can be profuse and milky but the latter may cause only a little watery discharge, dysuria or regularly no symptoms at all. If symptoms persist after treatment of these two organisms an infection with *Trichomonas vaginalis* could be postulated and this can be treated accordingly.

There is increasing concern about the resistance of *Neisseria gonorrhoeae* for the antibiotics commonly used around the world. In the last 10 years a high level of resistance to fluoroquinolone emerged and only third-generation cephalosporins now remain recommended as first line treatment regimen for gonococcal infections. There are reports of decreased sus-

ceptibility in *N. gonorrhoeae* to ceftriaxone and cefixime and also treatment failure from countries in South and East Asia and this has now spread to Australia, Europe and Canada [8]. The majority of reports are from developed countries and we are ill-informed about the situation in resource-constrained settings as surveillance data are lacking. So multi-drug resistance gonococci may be a problem in the near future and initial treatment with two drugs is already recommended in the United States and the United Kingdom[9].

Syndromic case management of vaginal discharge and lower abdominal pain is complicated by the lack of a clear definition of what constitutes an abnormal vaginal discharge in quantity, colour or odour and the multiple causes of lower abdominal pain in sexually active women. An infection of the vaginal mucosa is commonly caused by *Trichomonas vaginalis* alone or together with bacterial vaginosis (BV) or a yeast infection. If the local prevalence of *N. gonorrhoeae* or *C. trachomatis* is high a mucopurulent cervicitis may cause vaginal discharge and treatment for these organisms should be considered.

Women with lower abdominal pain accompanied by cervical excitation tenderness or vaginal discharge should be managed for pelvic inflammatory disease (PID). Infectious organisms that are commonly involved include *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Trichomonas vaginalis*, and anaerobic bacteria, and perhaps Mycoplasma. When women provide a history of a missed or overdue period, recent delivery, abortion, and physical examination indicates abdominal guarding, abnormal vaginal bleeding, or an abdominal mass, a gynaecological referral is due.

Human Papilloma Virus infections are the cause of genital warts but more importantly, of cervical cancer. Cervical cancer is the 2nd most common cancer among women, worldwide, and the great majority occurs in developing countries. HIV co-infection and the lack of effective screening programmes are contributing factors to this problem. Since several years we have two vaccines against HPV types [6, 11], 16, 18 that are used as a preventive strategy [10]. Both vaccines have been shown to be highly immunogenic and effective in prevention of incidence and persistent HPV infections that could lead to the development of precancerous lesions. Many countries have developed their own individual vaccine schedules. However, HPV-vaccination is preferably provided to individuals that have not yet become sexually active. The high cost of the vaccines and the challenges of immunizing girls aged 9 to 13 years have been barriers to introduction in less affluent countries. The first countries to get support for HPV vaccines through demonstration programmes were recently announced namely Ghana, Kenya, Madagascar, Malawi, Niger, Sierra Leone, Tanzania and Lao PDR. Most of them will begin introducing the vaccines this year protecting girls aged 9 to 13, mainly through vaccination in schools. By 2020, it is estimated that over 30 million girls will be immunized and this is exciting news [11].

Effective cervical cancer screening programmes in developing countries are lacking because of the weak health care infrastructure that is not able to offer regular pelvic examination of women or cytology screening, shortage of health care workers, and the use of the sensitive HPV DNA testing is completely out of reach. In developing countries there are also different uptake rates of screening among women of diverse ethnic and socio-economic groups so that e.g. in the USA there are significant differences in incidence and mortality rates between white and non-white women [12]. With these HPV vaccination programmes we have the potential to reduce the cervical cancer burden among women of different ethnic groups or socio-economic status and decrease the incidence and mortality of cervical cancer in developing countries.

CONCLUSIONS

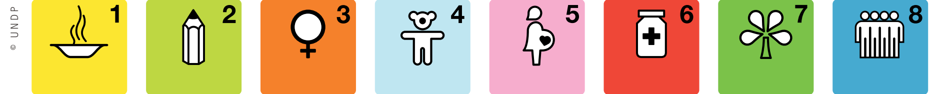
The role of traditional STI in increasing the risk of HIV acquisition has led to more interventions trying to control these infections. However, despite the availability of active drugs and e.g. syndromic case management traditional STI still cause high levels of morbidity and mortality. The many reasons for this include lack of education, sex work, alcohol use, unsafe sex, unfriendly health services etc. The increased demand for HIV care programmes can only be reached through decentralization to peripheral health care units that need trained staff and support through guidelines and a reliable supply of essential drugs. Nevertheless, STI prevention efforts should remain an important priority and despite the fact that medical male circumcision and pre-exposure prophylaxis are effective in reducing HIV incidence, we should not neglect the issues mentioned above like unsafe sex and alcohol use that still continue to hamper the prevention of STI.

CORNELUS J.G. SANDERS, MD /DERMATOLOGIST
SANDERSC@XS4ALL.NL
DEPARTMENT OF DERMATOLOGY UNIVERSITY MEDICAL CENTER UTRECHT

REFERENCE

Full list of references can be obtained from the author.

1. Fleming DT, Wasserheit JN. From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. Sex Trans Infect 1999;75:3-17.
2. orenromp EL, White RG, Orroth KK, et al. Determinants of the impact of sexually transmitted infection treatment on prevention of HIV infection: a synthesis of evidence from the Mwanza, Rakai, and Masaka intervention trials. J Infect Dis 2005;191:S168-78.
3. Obiero J, Mwethera PG, Wiysonge CS. Topical microbicides for prevention of sexually transmitted infections. Cochrane Database Syst Rev 2012;6:CD007961.
4. The Universal Access to Female Condoms Joint Programme at http://www.condoms4all.org/, accessed on May 10, 2013.
5. Johnson LF, Dorrington RE, Bradshaw D, Coetzee DJ. The role of sexually transmitted infections in the evolution of the South African HIV epidemic. Trop Med Int Health 2012;17:161-8.
6. Bernstein DI, Bellamy AR, Hook EW 3rd, et al. Epidemiology, clinical presentation, and antibody response to primary infection with herpes simplex virus type 1 and type 2 in young women. Clin Infect Dis 2013;56:344-51.
7. Newman L, Kamb M, Hawkes S, Gomez G, Say L, Seuc A, Broutet N. Global estimates of syphilis in pregnancy and associated adverse outcomes: analysis of multinational antenatal surveillance data. PLoS Med 2013;10:e1001396.



Sexual health, sexual education and gender equality in Africa

A plea for more small-scale approaches

With a huge worldwide AIDS epidemic, still most serious in Africa, a thematic journal issue on sexual health should contain an article on sexual education to youngsters. Many will agree that ignorance of sexuality is dangerous for youngsters, who have to cope with pressures of falling in love, changes in their bodies, and finding a partner in the present-day African environment with an AIDS threat in the background.

SEXUAL EDUCATION

A plea for more reflexion on the role of sexual education and gender equality in prevention activities should include more attention to the 'quality' of sexual education – both on what quality is and on how it can be best achieved. Even if it is agreed that meaningful prevention without sexual education is impossible, that means little if the quality thereof is not defined.

Possible changes in the AIDS situation in Africa are another reason to demand again more attention to sexual education.

At present it is widely accepted that visible AIDS has diminished, mainly due to the increased availability of Highly Active Anti Retroviral Therapy (HAART). But the arrival of HAART also led to a reduced feeling of urgency for the need of sexual education.

'SEX' REMAINS ONE OF THE MOST SENSITIVE SUBJECTS AND EVERYTHING RELATED TO IT IS DIFFICULT TO DISCUSS, MOST CERTAINLY SO IN AFRICA

COLOPHON

MT Bulletin of the Netherlands Society for Tropical Medicine and International Health

ISSN 0166-9303

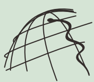
Chief editor
Hans Wendte

Editorial board
Joost Commandeur
Maarten Dekker
Esther Jurgens
Steven Smits
Silvia de Weerdt
Ed Zijlstra

Language editing
Elsa van Gelderen

Cover photo
Hanneke de Vries

design
Mevrouw VANMULKEN
Amsterdam



© 2013

That was a regrettable if perhaps unavoidable development and it may have to change. There are dark clouds on the horizon, due to uncertainty about the continuing availability of HAART caused by a combination of increasing resistance of HIV to treatment with a rise in costs and the worldwide financial crisis.

In a recent seminar in Amsterdam (AMC), specifically on this subject, some persisting alarm bells were sounded. The problems associated with lifelong daily treatment and in particular the ever-present problem of discontinuation of therapy by infected people, with its associated risk of resistance development, do not show signs of diminishing.

STRATEGY

HAART does not cure, and the number of People Living with HIV and AIDS (PLWHA) is still considerable in many countries. Therefore it will have to be considered, what will happen if HAART would be seriously interrupted because of these financial and/or resistance problems? No 'worst case' scenario is needed to demonstrate once more that prevention must remain a very, if not the most important strategy in the fight against AIDS. That means a return of the old problems around sexuality and sexual education. Most reports on sexual education still highlight the well-known problems: resistance of parents, unwillingness of teachers, unhelpful attitudes of most churches with their continuing emphasis on abstinence only, etc. Worldwide 'sex' remains one of the most sensitive subjects and everything related to it is difficult to discuss, most certainly so in Africa.

SMALL SCALE APPROACH

In brochures and booklets on prevention, the emphasis in sexuality is often on promoting the use of condoms to the extent that sexuality appears to be reduced to either 'don't do it' or 'do it with a condom'. Obviously that does not do justice to this most important life issue for teenagers!

The addition of the issue of gender equality to both sexual education and AIDS prevention, further complicates what can be called an enormous clash between rationality and emotions. Rational arguments to protect against infection fight emotional feelings about 'right' and 'wrong' in behaviour. This is complicated by the notion of traditional (but often church stimulated) 'African' values against the 'wicked West with its free sex and tolerance of homosexuality'. While a plea for 'African values' may in fact be more a plea to justify and maintain traditional male dominance in all things sexual, it has an appeal to many. And we have to realize that we know little about many aspects of the AIDS epidemic. Why no reports of increases in incidence in areas with massive upheavals due to war (sometimes with big increases in rape) or natural disasters? What are individuals and communities themselves doing to prevent infections? Are we not underestimating their own resourcefulness?

Such considerations must lead to a recognition of the potential of small-scale approaches, to be more flexible and create a better environment for finding innovative as well as locally acceptable solutions.

MANY ADVANTAGES

In three MT articles in 2009 and 2010, Miranda van Reeuwijk and Steven Smits stated separately, that a lack of understanding rather than insufficient knowledge, prevents youngsters to bring their knowledge into practice in their own lives. They made a plea for an ABC 'Plus' approach, where the 'Plus' stands for sexual education and gender equality. Based on their experience, they also stated, that sexual education should connect much more with the realities, experiences and perceptions of the youngsters themselves and should be provided in an environment, where youngsters feel free to discuss sexuality and gender equality among themselves. Another important goal should be to involve more parents in sexual education, by convincing them how important it is for their children if they really help them find their way. Sexual education by parents, if done rightly, avoids almost all of the problems associated with sexual education given by others. Smits reported on his successful discussions on sex and gender equality with traditional healers at the request of a Tanzanian NGO. The aim was to convince them of the need to assist parents to discuss sex with their children. To use peer educators is beneficial, provided also the limitations of this important concept are recognized!

Based on this and other experiences with NGOs in Cameroun, Tanzania and Kenya, Smits made a plea for more attention to such small-scale approaches. Support should preferably not only be financial, but should include technical advice for African NGOs, engaged in prevention activities for youngsters.

That, as stated above, while not a panacea for all problems, has the best potential for achieving accepted sexual education in the right environment and context. It provides more possibilities for a joint development of presentations on sexual education as well as tools and techniques to promote and facilitate discussions with and among youngsters.

Small-scale development activities with relatively small amounts of money have many advantages when compared with large programmes. This holds in particular for promoting changes in behaviour, both the most necessary and the most difficult issues in prevention. Results are often disappointing. But should that cause us to stop trying?

Could more readers come forward with their experiences with African NGOs on this subject?

STEVEN SMITS
STEVENPSMITS@GMAIL.COM
CONSULTANT HEALTH & DEVELOPMENT

ENGAGING MEN IN THE PURSUIT OF *SEXUAL AND REPRODUCTIVE HEALTH*

IN THE FIVE MINUTES IT TAKES TO READ THIS PAGE, 3 WOMEN WILL LOSE THEIR LIVES TO COMPLICATIONS OF PREGNANCY OR CHILDBIRTH, 60 OTHERS WILL SUFFER DEBILITATING INJURIES AND INFECTIONS DUE TO THE SAME CAUSES, AND 70 CHILDREN WILL DIE, NEARLY 30 OF THEM NEW-BORN BABIES. COUNTLESS OTHER BABIES WILL BE STILLBORN OR SUFFER POTENTIALLY LONG-TERM CONSEQUENCES OF BEING BORN PREMATURELY. THE VAST MAJORITY OF THESE DEATHS AND DISABILITIES ARE PREVENTABLE.

This statement from the Countdown to 2015 report [1] summarizes the issues still dominating the maternal and perinatal/child health agenda. Despite new evidence of a declining trend in maternal mortality, high maternal mortality continues to be concentrated in sub-Saharan Africa (SSA) and in South Asian countries. Still, an African woman's lifetime risk is 100 times higher than that of a woman in a developed country.

'Sexual health and rights' is one of the spearheads of the policy of the Netherlands Ministry of Foreign Affairs (MFA), besides food security, water, and security and the rule of law [2]. This renewed emphasis on sexual health and rights underlines the need to accelerate progress in the domain of sexual and reproductive health and rights (SRHR). Trend analysis shows that maternal mortality is decreasing – of about 200,000 since 1980 [3] – however, reducing maternal death needs to remain a priority area given its global magnitude and impact on women, their families and society as a whole. Similarly, other aspects of SRH require programmatic and policy attention, as maternal health is highly influenced by access to family planning and a reduction of unsafe abortions. Both areas are in dire need of improvements as some 20% of all unintended pregnancies end in an abortion – often performed under unsafe conditions – and on average the unmet need for family planning in the least developed countries is stalling around 25% [4].

SEXUAL AND REPRODUCTIVE HEALTH

In 1994, the **Programme of Action** (POA) of the **International Conference on Population and Development** (ICPD) redefined reproductive health by putting individual rights at the centre, while at the same time stressing not to lose sight of the larger social, cultural and economic contexts in which people operate. Two groundbreaking achievements of the ICPD were the shift from population control to a human rights perspective, and the inclusiveness of sexual health in the domain of reproductive health, noting that reproductive health should 'include sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counselling and care related to reproduction and sexually transmitted diseases.'

According to the definition, sexual health is '...a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled.' [5]

A SAFE AND PLEASANT SEXUAL LIFE

Sexual and reproductive health are closely linked. Sexual health refers to a wide array of issues such as sexual and gender identity, relationships and sexual pleasure, but also to negative consequences as HIV infections, cancer and infertility, unintended pregnancy, abortion, sexual violence, and harmful practices. The International Conference on Population and Developments (in Cairo, 1994) made a call for services that promote positive sexual health choices and well-being. However, sexual health interventions in many parts of the world are limited to the prevention, treatment and care of primary sexual health problems and concerns, such as STI (including HIV), and unwanted pregnancies (WHO, 2010) [(6)]. Reaching the stage in which all people have the knowledge and opportunity to pursue a safe and pleasant sexual life, however, is a challenge. It is highly dependant on access to (comprehensive) information about sexuality and to good quality health care. It requires an environment that affirms and promotes good health, and is influenced by the risks people face and by their vulnerability to adverse consequences of sexual activity such as contracting STI and unwanted pregnancies.

PROGRAMMES IN SEXUAL HEALTH

The Cairo conference initiated a shift from programmes, that exclusively focused on prevention, treatment and care of sexual ill-health, to programmes with broader concepts of health and well-being. Evidence is being collected on the success of such approaches. Examples are the importance of behaviour change in the control of HIV infection and AIDS, and how this has led to greater efforts towards promoting various approaches aimed at creating or maintaining healthy sexual lifestyles. In many programmes, however, the entry point is still the (reproductive) health system, such as in programmes aiming to increase access to family planning. It is essential to link these to a wider context, as access to contraceptives is often hampered because of societal and other barriers. Actions to improve sexual health should also include breaking taboos, revising legislation (like access to abortion), reducing stigma and discrimination of minorities, and above all reducing gender inequalities. A sexual health framework developed by the WHO [(7)] suggests such actions and provides examples of successful programmes in the domain of sexual health. Such as the telephone helpline in New Delhi, India, run by 'TARSHI' (Talking About Reproductive and Sexual Health Issues) that offers free and confidential counselling, and appropriate referrals on sexual and reproductive health, and sexuality-related issues.

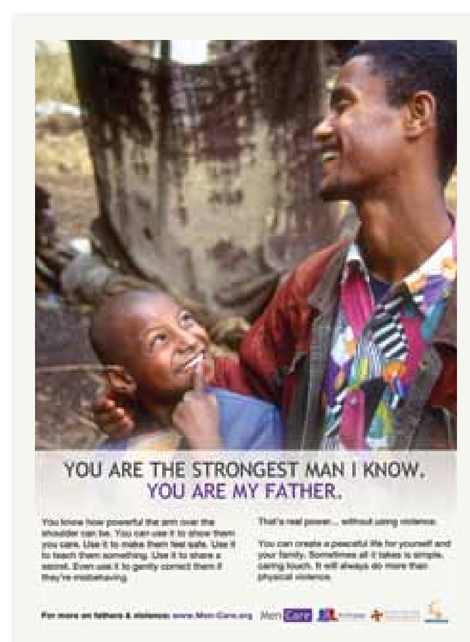
ENGAGING MEN

Other programmatic approaches are: programmes for screening and treatment of cervical cancer, integration of HIV services with local family planning, combining life skills programmes for youth with media campaigns, and the involvement of men in sexual and reproductive health, and in the prevention of gender based violence. With regard to the latter, it is increasingly understood that engaging men in SRH is crucial. Over the past decade there has been a trend to move away from women-focused programmes. More and more programmes have started to involve men in family planning and other reproductive health services, encouraging men to accompany their pregnant partners to antenatal care appointments and improve their parenting skills. These interventions aim to help men understand and take part in women's (reproductive) health, like recognizing danger signs in pregnancy). More generally they aim to achieve behavioural changes in men, like increasing male participation in contraception. Next to male involvement, some programmes aim to meet men's own sexual and reproductive health needs. More recently, programmes have emerged that attempt to address the SRH needs of women and men in a gender equitable way (WHO, 2010). In January 2013 the MenCare+ Programme was launched. [(8)] This multi-year programme – initiated by Rutgers WPF and funded by the Netherlands MFA – intends to address gender inequities in Brazil, Indonesia, Rwanda and South Africa. Interventions include provision of information to (young) men to ensure that they can make healthier decisions in relation to sexuality, relationships and fatherhood. In addition interventions aim to ensure easier access to contraceptives, and train health workers to involve fathers in care relating to pregnancy and birth. The programme is based on the vision that men should not only be regarded as the problem, but as part of the solution.

ESTHER JURGENS
POLICY ADVISER NVTG
(EJURGENS.NVTG@XS4ALL.NL)
CONSULTANT INTERNATIONAL HEALTH
(ESTHERJURGENS@XS4ALL.NL)

REFERENCES

1. WHO/UNICEF, 2012.
2. See: http://www.minbuza.nl/en/news/2012/07/house-supports-details-of-new-development-policy.html.
3. Hogan et al., 2010. Maternal mortality for 181 countries, 1980-2008: a systematic analysis of progress towards MDG 5; and Lozarno et al., 2010. Progress towards MDG 4 and 5 on maternal and child mortality: an updated systematic analysis.
4. United Nations, Department of Economic and Social Affairs, Population Division (2011). World Contraceptive Use 2010 (POP/DB/CP/Rev2010).
5. ICPD Programme of Action, 1994, paragraph 7.2. United Nations, Department of Economic and Social Affairs, Population Division (2011 World Contraceptive Use 2010 (POP/DB/CP/Rev2010).
6. WHO (2010). Developing sexual health programmes. A framework for action.
7. http://www.rutgerswpf.org/news/men-more-involved-fathers-and-carers-everyone's-advantage



Poster 'You Are My Father' from the Global Fatherhood Campaign

Ideas and practices of Zimbabwean women in preventing Sexually Transmitted Infections

Prevention of sexually transmitted infections including HIV is not just about abstaining from sex, using condoms or being faithful (ABC strategies). Many other factors determine whether a person will resort to using these strategies or not and we have to take these into account for effective prevention.

In a study carried out among 300 women and men in 1999-2000 in Zimbabwe, it became clear that an individual Zimbabwean woman neither owns nor controls her own sexuality, yet current HIV prevention strategies are centered around the individual. In Zimbabwe, there are more people besides the woman herself interested in how she runs her sexual life, rather hindering than promoting the woman from using the ABC strategies. The other people interested in a woman's sexuality are, e.g. her nuclear family, her extended family and even people that belong to her community. These relations present the women with complex kinship structures that can have a positive or negative influence on a woman's sexual relationships. Their kin, according to the stereotypical expectations regarding their marital status, impact upon the sexuality of women of different marital status differently. The research focused on how women of different marital status; unmarried, married, widowed, divorced and sugar mummies experienced their sexuality and their views and ideas on prevention. Different qualitative research methods were used, namely in depth interviews, participant observations, focus group discussions and passive listening. The male partners and those of similar marital status were also engaged in the study to complement the women's stories.

The study showed that how gender relations are constructed and lived out impacts greatly on how men and women live out their sexual lives exposing or protecting them from risky sexual relationships. There are stereotypes on how women of every marital status are supposed to behave, what many women act out publicly but have difficulties in living out in private. This is a problem made worse by societal expectations. Unmarried women are e.g. not supposed to have boyfriends let alone have sex yet they are expected to get married one day. Consequently sexual health services for this group are scarce and the service givers are often not trained for their roles or live out their cultural rather than their professional expectations on this group.

Some of the cultural practices that are risky have become redundant such as the norm that widows enter a levirate relation with a brother of the late husband. Traditionally it was older women who were widowed and nowadays most women widowed to AIDS are within the sexually active group of 15-49 years.

FINDINGS

1. Kin can compound the risky behaviour of an individual woman by trying to enforce some societal expectations deemed good like getting married. Many families often override the importance of the health of a woman in order to collect the bride price at her marriage irrespective of the health status of the marriage partner. Married women who want to leave abusive relationships, also e.g. when they feel their lives are at risk to infections due to risky sexual behaviour of partner, may not themselves decide to leave the husbands. They have to negotiate with relatives who more often than not force them to stay in bad relationships for fear of having to pay back the bride price.

In a quest to fulfil societal expectations, some women use strategies that are sexually risky. Unmarried women try to trap marriage partners by getting pregnant and this is often with more partners, heightening their risk of being infected with HIV. Young widows on the other hand, who culturally should not have sex since they are perceived as having no partners, indulge in sexual relationships. Due to stigma surrounding AIDS deaths, they do so without disclosing their health status to partners or without using protection for fear of rejection. These young widows and unmarried women often suffer from bad or lack of sexual health services since they are culturally not supposed to be indulging in sex. These cultural perceptions have permeated the sexual health structures and services.

The discourse around AIDS deaths is still negative. When people die of AIDS the families do not disclose that the death was AIDS related. So future partners are unaware of the risks of getting infected. However, the funeral platform for explaining the cause of death, in spite of its giving conflicting messages often shows some sanity and honesty by the traditional jester who exposes the cause of death in a jocular manner by playing out the deceased's life and other behaviour such as the sexual one at the funeral. Gossip at funerals may expose the cause of death but might not always be taken as seriously like if a jester would enact the behaviour of the dead person.

2. Policy at national level and the welfare structures that should be in place to support women in difficult situations are mostly absent, inadequate, or are not implemented timeously and correctly. There is little support for divorcees and unmarried women with children, forcing women into risky sexual relations in order to cater for their basic needs such as accommodation, school fees, medical bills and food for themselves and their children, once they leave husbands that are abusive or putting them at risk of HIV infection.

3. HIV medicines, Anti-Retroviral Therapies, are still not available to 15% of those who need them. There are still children being born with HIV since the Prevention

of Mother to Child Transmission Programme reaches just about 80% of pregnant women in Zimbabwe.

4. Gender based violence is still very high with more than 70% of the murder cases going through the courts of Zimbabwe stemming from domestic violence, a compounding factor to HIV transmission.

5. The economic and health systems, though improving from the near collapse in 2008, contribute to poor overall health of the population. Simple ailments are often left untreated due to lack of drugs, unaffordability of treatment by patients or lack of medical personnel. The government has to significantly up its current budget towards the health sector in order to improve its nurse and doctor ratio to patients and the overall administration of the health service sector. Women in Zimbabwe are still largely disadvantaged in terms of opportunities to developing themselves and owning property hence decreasing their agency to negotiate effectively in sexual relationships.

RECOMMENDATIONS

The main recommendations from this study are:

1. Current mainstream prevention guidelines and strategies tend to focus on the individual as the sole actor of one's sexuality yet the reality of Zimbabwean women shows otherwise. The many different actors who influence a woman's sexual life should be addressed in prevention and treated as potential facilitators of prevention rather than just hindrances. Cultural and religious practices that are retrogressive in HIV prevention should be challenged. Stereotypes that do not match with reality should be addressed and policies and other services matched to the reality of people's sexual lives.

2. Public fora that draw large crowds and which at the moment help shape discourse around sexuality such as funerals and kitchen tea parties should be utilized to challenge some risk pushing ideas and views but also to channel prevention messages that tally with people's realities.

3. The government of Zimbabwe has to work towards a woman and children friendly legal and social welfare system so women do not have to resort to engaging in risky sexual relationships in order to cater for their basic needs. Better implementation of the gender laws and policies to which Zimbabwe is a signatory has to be enforced by government and other civic and judicial groups. The gender relations imbalances have to be continuously challenged and addressed in order to give girls and women their rightful place in society.

4. Early testing and optimal treatment of Sexually Transmitted Infections including HIV should be policy and access to all HIV positive persons and all HIV positive mothers to prevent infection of their children should be 100%. Zimbabwe should prioritize HIV treatment as part of the HIV prevention strategy.

5. Gender imbalances are still a big problem. Although there are currently serious efforts to empower women economically within the land sector, there should be consistent support for the women educationally and economically to make their ventures viable. Enforcing equality of representation of men and women in all sectors in the country should be adopted by the government and women focused economic programmes should be implemented. This is necessary in order to improve their independent standing in life in areas such as education, ownership of property and protection from abuse and ill-treatment in society. Gender based violence is unacceptably high and the government needs to step up education on violence prevention within the population, the police and other relevant groups, eliminate causes of violence within homes such as high unemployment and work on improving perceptions of the role of violence within gendered relationships.

6. The economic situation and the health system of Zimbabwe need serious strengthening. Improvements in the economic sector can result in an improvement in the health of the population especially if this takes place in a non-gender discriminative manner. The health sector has to serve the population from a professional and health ethical perspective rather than a culturally bound and biased manner because this creates gaps in terms of service provision. It is time to move from service provision based on stereotype behaviour towards evidence based behaviour. Much as Zimbabwe is a hetero-normative society, the health sector has to cater for all people irrespective of sexual orientation because all untreated cases like those resulting from men who have sex with men, contribute to onward transmission of sexually transmitted infections including HIV. Some of these men are forced to hide their sexual orientation, enter relationships with women, thereby heightening their risk to infection with STI. Because of gender imbalances, men still refuse to test for HIV and their female partners cannot force them hence the government has to compel the men to test just as pregnant women are obliged to test before the 16th week. This should be taken up with other male centered strategies such as circumcision to reduce the transmission from males to females.

IRIS SHIRIPINDA, PHD
DRSHIRIPINDA@GMAIL.COM *(CONTACT THE AUTHOR FOR A COPY OF THE THESIS)*
LECTURER IN THE FACULTY OF HEALTH SCIENCES AFRICA UNIVERSITY MUTARE, ZIMBABWE
RESEARCHER AND CONSULTANT SEXUALITY, STI/HIV, GENDER AT GENDERJOY

REFERENCES

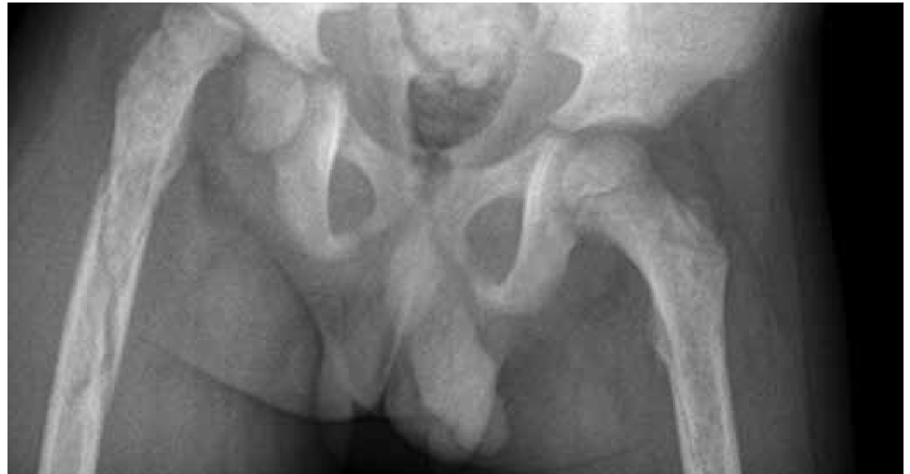
Shiripinda, Iris. (2012). Sex, HIV and AIDS. Practices and ideas of Zimbabwean women on sexuality and prevention of infection. Ph.D. thesis. Radboud University, Nijmegen.

PHOTOS MAARTEN DEKKER/ERDI HUIZINGA

Case report from Sierra Leone: a boy with sickle cell disease and severe osteomyelitis

SETTING

The Lion Heart Medical Centre is located in Yele, a small town in the middle of **Sierra Leone**. This new rural hospital opened in 2012 and has a capacity of 32 beds divided in a male, female, paediatric and maternity ward. The medical staff consist of one medical officer, two clinical health officers and qualified local nurses. It has a surgery room, basic laboratory facilities and digital radiography equipment. The nearest specialist hospitals are six hours away by car.



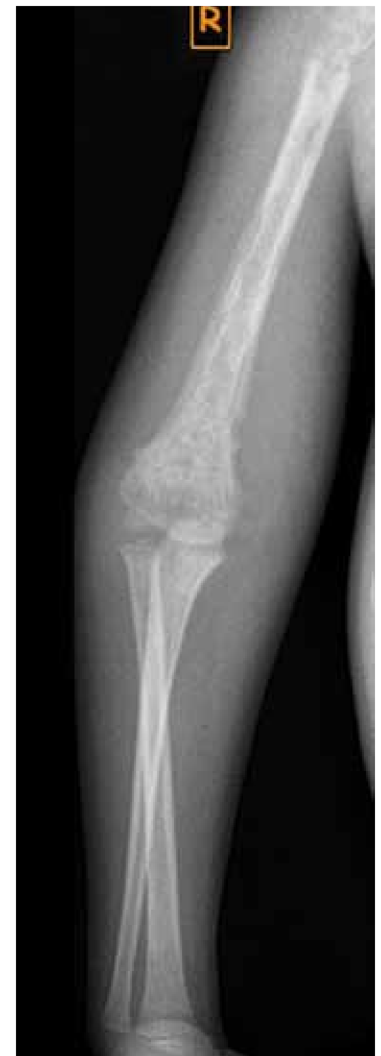
x-ray 1: proximal femurs

CASE REPORT

A six-year-old boy known to have sickle cell disease was admitted into hospital with a swollen and painful right upper arm and upper leg. There was no history of trauma. About one month ago the child had been treated in another hospital, because of a swelling in his right upper arm that had been drained. His mother did not know if any pus had been collected during that intervention.

During physical examination he looked ill; the temperature was normal. His right upper arm and upper leg were swollen and there was a healed scar in the middle of the dorsal side of the upper arm. Passive and active movement of both extremities were very painful and limited. The right leg was shortened. The erythrocyte sedimentation rate (ESR) was 70 mm/hour; C-reactive protein (CRP) and white cell count (WCC) were not measured. X-rays showed evidence of severe osteomyelitis in both femur and the right humerus. There was an epiphysiolysis of the right femoral head; the caput was intact but there was a spiral fracture of the proximal femur (x-rays 1 and 2).

The boy was treated with cloxacillin, ibuprofen, folic acid and skin traction of the right leg. Because of the severity of the osteomyelitis, **CONSULT ONLINE** was asked for advice on further treatment.



x-ray 2: right humerus, radius and ulna

ADVICE FROM THE SPECIALISTS

Four specialists responded within three days. All shared the opinion that in this complex case treatment would take long and prognosis would probably be poor.

Importance of testing for HIV and tuberculosis was emphasized as was preventing and treating anaemia, malnutrition and decubitus. Therefore, it was advised to combine skin traction of all affected bones with passive exercise of free joints.

In acute osteomyelitis the initial choice of intravenous antibiotic treatment could be flucloxacillin, pending culture results of drained pus, blood or a bone biopsy. If there is no clinical improvement after a few days, surgical intervention is necessary. Pus collections should be removed and ultrasound can be a helpful tool to localize these collections. To prevent instability of bones after surgery, bone sequestra should only be resected if enough surrounding bone has been formed.

Treatment can be monitored with clinical parameters, haematological markers and medical imaging. Antibiotics can be switched from intravenous to oral if there is clinical improvement. In case of chronic osteomyelitis antibiotic treatment is not indicated, as this would have no effect on dead bone and would only select resistant bacteria.

Despite maximal traction, prognosis of the epiphysiolysis would probably be poor.

DISCUSSION

Osteomyelitis is inflammation of the bone with bone destruction. The differential diagnosis includes soft tissue infection, cellulitis, septic arthritis, trauma and malignancy. The long bones, and especially femur and tibia, are mostly affected. The route of infection can be from external trauma or through haematogenous spread and can be acute or chronic, when treatment is insufficient or delayed.[1-3]

Incidence numbers in developed countries vary from 2 to 13 per 100,000 children.[2,4] *Staphylococcus aureus* is the most common causative organism, but in children with sickle cell anaemia *Salmonella* spp. and *S. pneumoniae* can also cause osteomyelitis.[1-3]

Risk factors include trauma and recent systemic infections. Children with sickle cell anaemia have a higher risk of developing osteomyelitis, and in these cases multifocal osteomyelitis is also more common.[2]

Most of the children with osteomyelitis will present with pain, swelling and limited function of the affected part of the body.[2-4] About 40 % of the children will not have a fever on presentation.[2] In resource-poor settings children will probably reach medical care late and therefore are likely to have advanced disease on presentation.

Inflammatory markers such as ESR and CRP will be elevated in most cases, but because CRP has a faster response to disease activity, it is a better marker to monitor treatment.[2-4]

Plain radiographs can support diagnosis and exclude other diagnoses. Bone damage only becomes visible after about two weeks. Ultrasound can be used to localize and drain fluid collections.[2-4] Other imaging modalities such as MRI, CT or bone scans are not available in resource-limited countries.

In uncomplicated osteomyelitis, a course of intravenous antibiotics that includes cover for *Staphyloccus aureus*, can be given that may be switched to oral treatment for three more weeks. Antimicrobial sensitivity testing is helpful to guide the antibiotic choice if available. Temperature above 38.4 °C and CRP above 100 mg/L are important indicators to continue intravenous treatment.[2] Surgery intervention is an option if there is no clinical improvement on antibiotic therapy after 3 days or if there are big pus collections[1-2].

CONCLUSION

In this case report we presented a young boy with sickle cell disease and severe multifocal osteomyelitis. It underlines the need for early detection and treatment of sickle cell crises and/or osteomyelitis.

However, this case also shows that even without expensive diagnostic and treatment facilities, local health workers in low-income countries can diagnose and treat this complication, thus reducing morbidity and prevent disability.

MAARTEN DEKKER, MD
RESIDENT TROPICAL MEDICINE, CONSULT ONLINE

ERDI HUIZENGA, MD
MEDICAL OFFICER LION HEART MEDICAL CENTRE, YELE, SIERRA LEONE

CONSULTONLINE@TROPENOPLEIDING.NL

REFERENCES

1. Faust SN, Clark J, Pallett A, Clarke NMP. Managing bone and joint infections in children. Arch Dis Child. 2012;97:545-53.
2. Dartnell J, Ramachandran M, Katchburian M. Haematogenous acute and subacute paediatric osteomyelitis. A systematic review of the literature. J Bone Joint Surg Br. 2012;94-B:584-95.
3. Roord JJ, Kimpen JLL. Infectieziekten. In: Brande JL van den, Heymans HSA, Monnens LAH, eds. Kindergeneeskunde. Maarssen; Elsevier gezondheidszorg: 1998. p. 374-409.
4. Dodwell ER. Osteomyelitis and septic arthritis in children: current concepts. Curr Opin Pedatr. 2013;25:58-63.

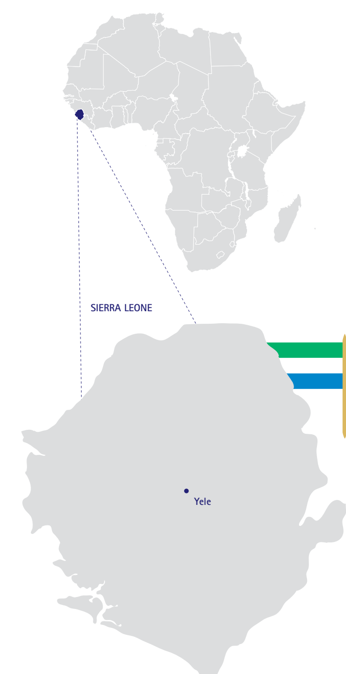


PHOTO ROB MOOIJ

A CASE OF UNUSUAL, COMPLICATED ADULT MEASLES DURING A MEASLES OUTBREAK IN NDALA HOSPITAL, TANZANIA

Measles is a highly infectious viral disease which can have serious complications. Immunization is effective, but outbreaks can occur when there is low vaccination coverage.[1-3] Measles is still one of the major contributors to childhood morbidity and mortality,[4,5] with almost 140,000 deaths worldwide in 2010.[6]

In 2011 and 2012, for the first time in 20 years, an outbreak of measles was observed in Ndala Hospital, a district-size mission hospital with 128 beds. All patients came from villages in Nzega and Uyui districts of the central plateau of Tanzania. Among the patients was an unexpected large number of adults. Here we describe a case of adult measles with a serious complication.

CASE

A twenty-two year old, previously healthy man was admitted to our hospital with a generalized rash, fever and cough. On examination the patient appeared ill and febrile. He had bilateral conjunctivitis and a generalized confluent maculopapular rash. On auscultation of the lungs bilateral crepitations were heard. The HIV-test was negative. Because he came from a village where other cases of adult measles had been reported, complicated measles was diagnosed given the clinical findings. Treatment was started with vitamin A tablets, tetracycline eye ointment and oral benzylpenicillin and gentamicin.

Two days after admission the fever had disappeared, but the skin of the upper torso and neck became swollen and

tender to touch. The chest X-ray showed signs of bronchopneumonia with subcutaneous emphysema without pneumothorax or pneumomediastinum. Since there was no respiratory distress, the same management was continued. When the patient was discharged from hospital three days later, he was in good condition, but he still had some pain at the site of the subcutaneous emphysema.

MEASLES OUTBREAK

From 2011 to 2012 in total 185 patients were admitted to our hospital with the diagnosis of measles. The diagnosis was made by the clinicians using clinical symptoms (fever, pulmonary symptoms, coryza, conjunctivitis and typical rash), vaccination status and exposure to measles.7 Most of them (161) were young children, of whom 9 died (5.6%). During the same period, we admitted 24 adults with measles, of whom 1 died (4.2%). In 5 cases, an HIV-test was performed because of clinical suspicion. However, all tests were negative. Most patients recovered with antipyretics and sometimes (oral or intravenous) antibiotics to treat secondary bacterial pneumonia. Two pregnant women probably suffered from obstetric complications due to a measles infection. One delivered a fresh stillbirth and the other delivered a premature child.

DISCUSSION

Through increased vaccination efforts, the incidence of measles has been reduced worldwide. To achieve eradication in 2020, the target for WHO member states for 2010 was to reduce measles mortality by 90% and in 2015 by 95% from the 2000 estimates.[6,8] The first target was already met in the African Region in 2006, but only a small decrease in mortality followed in 2009 and 2010.[6,8] We were unable to obtain district vaccination coverage figures, but for the Ndala-ward the measles vaccination coverage was 66% in 2011.[9] In the referral area of Ndala hospital access to education and health services is poor. Many people do not speak Swahili, which can contribute to lack of knowledge about vaccinations. A low level of education of the head of the household and a low family income, both of which are common in our area, have been previously described as the most important predictors for completion of immunization.[10]

In our hospital 10 (5.4%) patients infected with the measles died. In other reports the case fatality rate of measles varies from 0.3% in developed countries to up to 28% in community-based studies in developing countries.[11] Differences can be caused by prevalence of malnutrition and vitamin A deficiency, which contribute significantly to the mortality.11In the literature the most common complications which often lead to death are pneumonia, bronchitis and encephalitis.[11-13] In our hospital most patients died of respiratory infections and following distress.

Severe measles is more common and has a higher fatality rate in immunocompromised patients.[11] HIV-infected persons with concomitant measles infection are more likely to have more uncharacteristic clinical findings and more severe measles infection, with high rates of pneumonitis and death.[14] Since only 5 of our patients with measles infection were tested for concomitant HIV infection, we do not exactly know the percentage of concomitant HIV infection. However, given the relatively low HIV prevalence in our area (3.1% of pregnant women),we assume that this percentage would not be very high. [9]

We reported a case of subcutaneous emphysema as a complication of measles. Subcutaneous emphysema secondary to measles is a rare complication, and only few cases have been reported.[15,16] It may be caused by severe coughing episodes (pressure gradient theory).[15,17] In children it accounts for about 6.4% of complications, mostly in the malnourished.[16] In adults the estimated prevalence is 2%,[12] and it is associated with poor outcomes due to airway obstruction.[13,16]

In a population without vaccinations measles usually occurs in epidemics every few years, with mostly children affected. When vaccination coverage is incomplete an epidemic, many years after the previous one, will also affect young adults. This has recently also been described in Malawi.[18] Measles in adult patients is usually seen in unvaccinated people,[3,19] although infection can also occur after adequate vaccination, especially in HIV-infected individuals.[14,20] In adults many complications are documented, mostly pulmonary.[12,13,21-23]

CONCLUSION

Measles is best known as an infection of young children, being most dangerous in the malnourished. In the absence of regular epidemics inadequate vaccination coverage resulting in an incidental epidemic can cause adults to suffer as well, with sometimes serious complications.

ACKNOWLEDGEMENTS

The authors acknowledge the support of the staff of Ndala Hospital in general and especially of Danielle van den Hamer (Nursing Officer), who helped with the data collection.

ROB MOOIJ
R.MOOIJ1983@GMAIL.COM
FORMER MEDICAL OFFICER, NDALA HOSPITAL, TANZANIA, PRESENT OB/GYN RESIDENT (AIOS) AT MAXIMA MEDICAL CENTER, VELDHOVEN

JOSEPH LUGUMILA
ASSISTANT MEDICAL OFFICER, NDALA HOSPITAL

MASUMBUKO MWASHAMBWA, MD
COLLEGE OF HEALTH SCIENCES, UNIVERSITY OF DODOMA, TANZANIA

REFERENCES

Full list of references can be obtained from the author.

1. Stein-Zamir C, Zentner G, Abramson N, et al. Measles outbreaks affecting children in Jewish ultra-orthodox communities in Jerusalem. Epidemiol Infect 2008;136(2):207-214.
2. Sutherland AG, Barnabas K, Haribhaskar K. Measles: an adult case during a local outbreak. BMJ Case Rep 2009:bcr02.2009.1559.
3. Tan JB, Cao WH, Pang ZC, et al. Study on the relative risk factors of adult measles in a case-control study in Qingdao city. Zhonghua Liu Xing Bing Xue Za Zhi 2006;27(3):226-229.

NEXT EDITION OF MT FOCUSING ON URBAN HEALTH

CALL FOR CONTRIBUTIONS

As a prelude to the Symposium, the theme of urban health will also feature in the September edition of MT. Readers are invited to contribute with articles on this thematic area (deadline for contributions is August 5). The December edition will focus on Global Health Research (deadline October 28). For more information or submit of articles please contact chief editor Hans Wendte (hanswendte45@gmail.com) or the MT secretariat.

International Health Alerts

THE LAST EDITION OF IHA CAN BE FOUND ON THE NVTG WEBSITE **www.nvtg.org/publicaties**

NVTG

Membership of the **Netherlands Society for Tropical Medicine and International Health** (NVTG) runs from January 1st to December 31st and may commence at any time. Membership will be renewed automatically unless cancelled in writing before December 31st. Membership includes MT and International Health Alerts. An optional subscription to TM&IH carries an additional cost.

Non NVTG members can subscribe to MT through a student membership of the Society for €22 per year by sending the registration form through our website **www.nvtg.org/lidworden.php** or by sending name and postal address to **nvtg@xs4all.nl** or **MTredactie@xs4all.nl**.

Contributions and announcements should be submitted to the editorial office by e-mail: nvtg@xs4all.nl or MTredactie@xs4all.nl. Closing date for N° 03 / October 2013: 05-08-2013.

Disclaimer: all views expressed in this journal are of the authors only and are not necessarily shared by the editors of MT. Letters and articles may be edited for purposes of (clarity and) space.

Netherlands Society for Tropical Medicine and International Health
President: A.A.L.J. (Ankie) van den Broek
Secretary: B. Gerretsen
Secretariat: E.H. Laumans
P.O. Box 5032
1200 MA Hilversum
The Netherlands
0031 (0)6-34306672
nvtg@xs4all.nl
www.nvtg.org