

MICROBES AND MORALS, AN
UNLIKELY LOVE AFFAIR

AN INAUGURAL LECTURE,
2011/2012

RASHEED AJANI BAKARE

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**MICROBES AND MORALS, AN
UNLIKELY LOVE AFFAIR**

*An inaugural lecture delivered
at the University of Ibadan*

on Thursday, 5 April, 2012

By

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The Vice-Chancellor, Deputy Vice-Chancellor (Administration), Deputy Vice-Chancellor (Academic), Provost of the College of Medicine, Dean of the Faculty of Basic Medical Sciences, Dean of the Postgraduate School, Deans of other Faculties and of Students, Distinguished Ladies and Gentlemen.

I feel highly honoured to stand before you today to deliver the third in the series of inaugural lectures for the 2011/2012 academic session from the Faculty of Basic Medical Sciences in the College of Medicine of our great University. This is the second inaugural lecture from the Department of Medical Microbiology. Professor E.O. Ogunba, a fine gentleman, delivered the last lecture on January 10, 1980. The title of his lecture was "Combat with Parasites: An Uneasy Encounter". I am indeed grateful to the Vice-Chancellor, the Provost of the College of Medicine, the Dean of the Faculty of Basic Medical Sciences and the entire University for the opportunity to showcase the achievements of my Department in the field of Venereology.

The late eighties and the early nineties marked a massive exodus of Nigerian intellectuals to the Diaspora. Against the tide of events, I chose to remain behind in the face of pressure from the adverse economy and an inclement socio-political environment. This noble sacrifice, I thank God, has ensured the sustenance of undergraduate and postgraduate training and research in the country. The title of my lecture is "Microbes and Morals, an Unlikely Love Affair". I intend to discuss case series of Sexually Transmitted Infections that I have encountered in my almost three decade practice as a venereologist.

Preamble

I stumbled into the field of Medical Microbiology 29 years ago, having initially started off as a resident in Anatomic Pathology Department. A few months into my programme, I realized that I was not yet where I wanted to be. My restlessness eventually resulted in my eventual relocation to the

Department of Medical Microbiology. That restlessness thankfully has paid off as my sojourn in the field of Microbiology has been without any doubt the most rewarding experience ever. To this end, I remain eternally grateful to the person of Professor Abimbola Olu Osoba, who on my joining the Department took me under the wings of his enviable mentorship. He has remained a good teacher and a good role model for the budding clinical microbiologists. I thanked the Lord God Almighty who has made me to be the long enduring rugged bridge between the past and the present of the Department of Medical Microbiology.

History of Medical Microbiology Department

The Department of Medical Microbiology & Parasitology was created in 1948 as one of the foundation departments of the then Faculty of Medicine of University College, Ibadan, which was then affiliated to the University of London, UK. It started as Department of Bacteriology located at Adeoyo Maternity Hospital, Ibadan. In those days, the Department was manned by a few staff made up of one professor, one lecturer I and a resident doctor. There were three expatriate technical staff in the laboratory, two of whom were working in the bacteriology unit while the remaining staff were in parasitology section.

In 1957, the Department moved to its present location at the University College Hospital, Ibadan. The virology and mycology units were added in 1960 with the help of World Health Organization. At present, the Department is made up of the following unit: Bacteriology, Parasitology, Venereology, Mycobacteriology, Mycology and most recently, the Clinical Virology unit was also approved both by the University College Hospital and the University of Ibadan.

History of STI (The Great, The Near, and STD)

Evidence of appearance of venereal disease in published histories, biographies, and even medical histories is often quite poor. A partial list of the famous and infamous that are

known or believed to have STD is impressive. Quite a few distinguished writers or men of letters also contracted syphilis or gonorrhoea. The list includes Moliere (1622-1673), Cassanova (1725-1798), James Boswell (1740-1795), Johann Wolfgang van Goethe (1749-1832), John Keats (1795-1821), Fredrich Wilhelm Nietzsche (1844-1900), August Strindberg (1849-1912), Guy de Maupassant (1850-1893), and Oscar Wilde (1854-1900). James Joyce (1882-1941) also had syphilis and knew it. His disease was congenital and manifested itself as lifelong iritis. In fact, syphilis is a major theme in Joyce's *Ulysses*; he uses the disease as a metaphor for the moral sickness he saw in Ireland. It is a sickness he attributed in part to hypocritical attitudes towards sex.

The behaviour of Caius Augustus Germanicus, who succeeded to the Roman throne in A.D. 37 at the age of 24 years, was so erratic that some medical historians have concluded that he was afflicted with syphilis. Caius built three miles long bridge with houses on it to imitate that of Xerxes over the Hellespont. Upon its completion, he gave a huge banquet on the middle of the bridge and subsequently threw a number of his guests into the river. A number of eighteenth century rulers were also infected with STIs; Napoleon Bonaparte (1760-1821) apparently contracted both syphilis and gonorrhoea; Peter the Great of Russia (1672-1725), Frederick the Great of Prussia (1729-1796) all had evidence of syphilis. Several popes reportedly also contracted venereal disease including Sixtus (1414-1484), who was noted for his debauchery and Alexander VI (1431-1503). Similarly, both Benito Mussolini (1883-1945) and Adolf Hitler (1889-1945) had venereal disease. Mussolini had both gonorrhoea and syphilis and received prolonged treatment for syphilis while still a refugee in Switzerland. Hitler contracted gonorrhoea, probably while studying art in his youth.

The Moral Perspective

During the past century or so, there has been substantial change in the attitude of the medical profession and the

general public towards STIs and persons with STIs. Affliction with herpes, syphilis, or gonorrhoea no longer necessarily brings an individual historical notoriety. Neither does such an affliction renders as indisputable evidence of an individual's low moral character or of promiscuous tendencies. Moreover, where physicians once frequently refused to treat venereal disease patients, the medical profession now more actively seeks to eradicate these diseases through aggressive diagnostic and treatment programmes. This evolution did not occur in a vacuum; rather, shifts in lay and professional attitudes toward STD and its victims are inextricably tied in the past as well as in the present to shift in attitudes towards human sexuality, sex education for children and adolescent. These attitudinal changes are reflected in changing social, political, and regulatory approaches employed to control the spread of STDs.

Popular concern over the spread of venereal disease in Europe surfaced during the twelfth century in connection with prostitution. My Vice-Chancellor Sir, this early association between the spread of the disease and prostitution has persisted to the present. As a result of the association, the earliest efforts to control the spread of venereal disease focused largely on the regulation and isolation of prostitutes, but generally not their customers as well.

In the nineteenth century many had a number of specific sexual fears, some of which were mutually contradictory. For example a lot of people thought that sexual "excess" in general threatened to cause harm to the moral character of the large civilized as well as to the physical health of individuals. Extramarital sex was also believed to be capable of breaking up the home and derailing the advance of civilization. Masturbation or self abuse was also believed to be capable of weakening a man, leading to loss of energy and coldness towards person of the opposite sex. All this believe was however at variance with the thoughts of the physicians of old who worried that underuse of the sexual organs would result in dysfunction. How then do we condemn the layman who on his own believes that frequent "exercise" of the sexual organs

within the marriage often resulted in unwanted children, hence had to resort to extramarital affairs with prostitutes, thereby increasing his risk of acquiring venereal disease.

Reformers during the early period saw the problem of venereal disease control as bound up with antiquated notions of human sexuality and urged parents and educators to provide their children with more factual information on "sex hygiene and physiology". The attitude of shame and silence that surrounded discussion of syphilis and gonorrhoea has been largely responsible for the misinformation regarding the prevalence of venereal disease and the method of transmission. Victims of venereal disease are often wrongly regarded by the society as outcasts or criminals.

My Vice-Chancellor Sir, though I do not intend to portray myself as a moralist neither do I claim to be a saint but I should not be judged by what I would be saying or what the audience would be seeing in the course of this lecture. But this is the life of a venereologist. There have been a lot of misconceptions in the past about the moral character of health professionals that work in the Special Treatment Clinics. But time has proven that to catch a thief, you must indeed learn to act and also think like the thief. Many of our staff who started out as a "saint" have been successfully converted to being like the rest of us. One of them is in the audience here today.

What are STDs?

The term sexually transmitted diseases (STDs) is used to refer to a variety of clinical syndromes caused by pathogens that can be acquired and transmitted through sexual activities. STDs remain a very important public health problem. With the emergence of the HIV/AIDS pandemic, the imperative for a more coordinated plan to bring STDs under control has become increasingly urgent.

Epidemiology of STDs

Globally, it is estimated that 340 million new cases of curable STIs occur each year. These consist of 12 million cases of syphilis, 62 million cases of gonorrhoea, 98 million cases of

chlamydia and 170 million cases of trichomoniasis. In Nigeria, there are about 3 million reported annual cases of STIs mainly caused by *chlamydia*, *N. gonorrhoeae* and *Trichomonas vaginalis*. There are also increasing reports of genital ulcer disease (GUD) due to chancroid, herpes, and primary syphilis.

Incidence and Prevalence of STI Globally and in Nigeria

STIs continue to rank among the top five categories for which adults in developing countries seek healthcare services. It is estimated that 10-20% of adult patients attending government health facilities in sub-Saharan Africa do so because of STI. In developing countries both prevalence and incidence of STIs are still very high. STIs are considered to be the second most likely cause of healthy life lost in women of reproductive age. In men, STIs (including HIV) account for nearly 15% of all healthy life lost in this age group.

Affected Population Cohorts in Nigeria

In terms of age, adolescents and young adults are at higher risk of contracting STI. Existing prevalence figures in Nigeria do not differ significantly from global figures. Community-based surveys of adolescents (14 – 19 years) in Nigeria recorded the following prevalence rates: *T. vaginalis* (9 – 11%), *N. gonorrhoea* (0 – 3%), *C. trachomatis* (2 – 11%). In developing countries, about one half of the population is less than 15 years of age. This age group, 15 – 24 years which has the highest STI prevalence, is entering the period of sexual activity, resulting in higher incidence of STI cases.

My Vice-Chancellor Sir, it is really unfortunate that poverty and gender inequalities have turned some women to commercial sex workers as a means of survival. Older men, on the other hand, tend to be more sexually adventurous and are more likely to have disposable income, therefore, enhancing the economic success of the female sex workers. Also, cultural practices (i.e. abstinence by pregnant female partners) tend to encourage multiple sexual partnerships in males.

Certain occupations tend to reinforce high-risk sexual behaviour. These are: the mobile workers (long distance drivers, professionals, migrant workers, oil workers) and the sex workers. Urbanization and migrant labour favours transmission of STI by increasing demand for commercial sex. Recent data however seem to show no significant variation in the prevalence of STI in rural and urban areas.

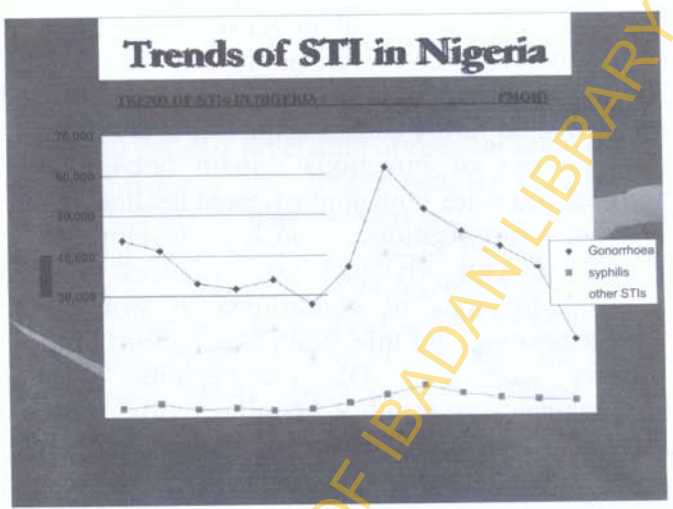


Fig. 1: Trends of STI in Nigeria

Aetiology of STDs

I shall now proceed to talk about the aetiology of STDs, starting with the agents causing urethral discharge and those ones that cause genital ulcers.

Gonococcal Urethritis

The major clinical manifestations of gonorrhoea in men were recognized in ancient Chinese, Japanese, Egyptian, Roman, and Greek literature and in the Old Testament, Galen (130A.D) named the syndrome *gonorrhoea* (Greek, “flow of seed”) in the belief that the urethral exudate was semen. Curiously, there is little recorded evidence of awareness that urethral discharge in men was linked with morbidity in

women until relatively recent times. *Neisseria gonorrhoeae* was demonstrated by Neisser in stained smears of urethral, vaginal, and conjunctival exudates in 1879, making the gonococcus the second reported bacterial pathogen after the discovery of *Bacillus anthracis*, *N. Gonorrhoeae* was first cultured in vitro in 1882, and effective antimicrobial therapy in the form of sulfonamides was first applied in the 1930s.

Uncomplicated gonococcal infection may be defined as gonorrhoea that remains localized to the site(s) of initial inoculation, that does not cause disabling symptoms, and that if promptly treated rarely causes sequelae. It is estimated that 80 to 90 percent of infections remain uncomplicated in industrialized countries with sophisticated healthcare delivery systems, but complications probably develop far more frequently in patients who lack prompt access to effective therapy. Complications of gonorrhoea in women include proctitis, accessory gland infection (Skene, Bartholin), pelvic inflammatory disease (PID), peri-hepatitis (Fitz-Hugh-Curtis), pregnancy morbidity, conjunctivitis, pharyngitis, disseminated gonococcal infection; while in men, they include epididymitis, proctitis, conjunctivitis, abscess of Cowper's/Tyson's glands, seminal vesiculitis, prostatitis, pharyngitis, and disseminated gonococcal infection.



Fig. 2: Gonococcal Urethritis

Gonococcal Pharyngitis

Pharyngitis is an inflammation of the pharynx involving lymphoid tissues of the posterior pharynx and lateral pharyngeal bands. While most cases are due to viral infections, *Streptococcus pyogenes* has been found to be the most important bacterial agent associated with acute pharyngitis and tonsillitis. However, various studies have incriminated *Neisseria gonorrhoeae* as a possible cause of acute oropharyngitis and tonsillitis. Oropharyngeal gonococcal infection is recognized as a form of asymptomatic gonorrhoea and it has been described in case studies and in selected groups of patients, such as homosexual men, pregnant women, and patients practising orogenital intercourse.

Among patients with gonorrhoea, the pharynx is infected in 3 – 7 percent of heterosexual men, 10 to 20 percent of heterosexual women, and 10 to 25 percent of homosexual men, while it is the sole site of infection in approximately 5 percent of patients, regardless of gender or sexual orientation. The infection is transmitted to the pharynx by orogenital sexual contact and is acquired more efficiently by fellatio than by cunnilingus, but occasionally, cases may be due to auto-inoculation from anogenital infection. While over 90 percent of pharyngeal infections are asymptomatic, reports suggest that gonococcal infection can cause acute pharyngitis or tonsillitis that is occasionally associated with fever and cervical lymphadenopathy. The asymptomatic carriers constitute a reservoir of infection and run a greater risk to themselves of developing disseminated gonococcal infection. While clinical examination may reveal no abnormality in the oropharynx, the signs, if present, are similar to those of the other common throat infections and include redness of the fauces, uvular and tonsillar area with or without streaks of mucopus.

Oropharyngeal gonorrhoea is more common in some countries because of sexual habits. In a series of fifty patients with gonorrhoea who admitted recent orogenital contact, Hellgren (1971) isolated gonococci from the tonsils in one out of twenty women and one out of thirty men. Bro-Jorgensen

and Jensen (1971) investigating unselected Danish patients with gonorrhoea, found gonococci in the tonsils in six (6%) of 95 Danish men and in six (9%) of 66 women. Of 71 Danish men, 57(80%), and of 62 Danish women, 38(61%) stated that they had had orogenital contact during their last sexual experience and it was much more commonly practised with regular partners than with casual contacts.

While we are not unaware of the difficulty in the diagnosis and treatment of patients with gonococcal pharyngitis, attempts have not been made to screen our patients in spite of their large number, especially commercial sex workers (CSWs) used for previous studies in our centre.

My Vice-Chancellor Sir, permit me at this point to tell you two of my personal experience and I assure you that every sentence is true. *The first story is that of a senior nursing sister who came for STD screening at our special treatment clinic in UCH. When we enquired about the forms of sexual intercourse that she engages in, she affirmed that she frequently practises oral sex and claimed that the height of the fun is when the man releases into her throat as she loves to swallow semen claiming that it usually tastes like ice cream. The second case is that of a pregnant virgin patient, a 23 years old English graduate who presented at our clinic with history of four months amenorrhoea. Clinical examination confirmed her claims of being a virgin as her hymen was truly intact, however ultrasound report confirmed her to be sixteen weeks pregnant. She was amazed, and innocently asked if frequent swallowing of semen could result in pregnancy, a question which confirmed her frequent practice of oral sex. Further questioning however showed that the pregnancy occurred through foreplay, with resultant discharge of semen at the introitus by her adventurous partner.*

The above stories were what prompted us to embark on a study which aimed at examining the incidence of gonococcal infection of the pharynx amongst female patients attending our clinic in Ibadan. We recruited 102 women seen at the Otorhinolaryngology (E.N.T) Clinic, 85.3% of whom complained of sore throat as well as 341 women that attended Special Treatment Clinic. While genital cultures were

positive for *N. gonorrhoeae* in 98(28.7%) of the 341 women screened, 11(2.5%) had gonococcal pharyngeal infection. While no gonococci could be isolated from 102 female patients seen at the E.N.T Clinic, 16(15.7%) had *Streptococcus pyogenes* isolated from the pharynx. Eight (8.2%) of those who had genital gonorrhoea also had pharyngeal gonococcal infection. Pharyngeal infection was therefore significantly associated with genital infection for gonococci in the patients screened. While 24(7%) of the 341 women investigated at the Special Treatment Clinic admitted to the practice of fellatio, 9(81.8%) of the 11 women with pharyngeal gonococcal infection had histories of fellatio. The practice of fellatio was therefore associated with pharyngeal gonococcal infection. All the *N. gonorrhoeae* isolates were susceptible to Spectinomycin (MIC<640ug/ml), Ceftriaxone (MIC< 0.25ug/ml), and Ciprofloxacin (MIC< 0.06ug/ml); while 97.3% of the 98 isolates were PPNG.

With the pharyngeal gonococcal infection confirmed in this study, a new dimension has been added to the picture and epidemiology of gonorrhoea in our environment. However, the relatively low incidence of the pharyngeal gonococcal infection and with the difficulty of performing large numbers of sugar fermentation reactions on pharyngeal isolates argues against the routine screening of all patients for gonococcal pharyngeal colonization.

Gonococcal Conjunctivitis

Gonococcal conjunctivitis is a highly contagious eye infection caused by *Neisseria gonorrhoeae*. It is a notifiable disease. It can arise in several different situations. Babies of women with genital gonorrhoea can be infected at birth (neonatal gonococcal ophthalmia). It is usually a localized, fairly severe infection of the conjunctiva with intense inflammation and copious purulent discharge with or without periorbital oedema. Corneal ulceration, perforation and blindness can occur if treatment is not given promptly. It is also possible for the infection to be quite mild and endure for several weeks or months.

Mode of Transmission

Sporadic cases occur in adults where the source is usually someone with a genital infection. This may occur where:

- A person who has genital gonorrhoea who (usually) accidentally infects his or her eyes by touching them with fingers or fomites (eg clothes, towels) contaminated with their genital secretions.
- A person becomes infected by contact with the contaminated fingers or fomites of another person who has genital gonorrhoea.
- Epidemics can arise from a person with gonococcal conjunctivitis transmitting infection by direct, non-intimate interpersonal contact, and contact with infected fomites (eg clothes, towels) or by transmission by flies.

Incubation

Usually 2 to 7 days, but sometimes can be longer.

Clinical Features

A clinical illness usually characterized by intense inflammation of the conjunctivae, copious purulent discharge with or without periorbital oedema. Low grade, mild conjunctivitis lasting several weeks may also occur.



a



b

Fig. 3: Gonococcal conjunctivitis

In 1986, so many ladies who had viral conjunctivitis “Appollo” invariably used their infected urine to clean their eyes. Some of them had asymptomatic gonococcal infection. This led to the corneal perforation and eventual blindness within 48-72 hrs of having eye discharge.

Epididymo-orchitis

Epididymitis is inflammation of the epididymis—the coiled tube that collects sperm from the testicle and passes it on to the vas deferens. There are two forms of this disease, acute and chronic. Acute epididymitis comes on suddenly with severe symptoms and subsides with treatment. Chronic epididymitis is a long-standing condition, usually of gradual onset, for which the symptoms can be improved with treatment but may not completely be eradicated. Most cases of epididymitis occur in adults.

Orchitis is inflammation of the testicle. It almost always comes on suddenly and subsides with treatment. Chronic orchitis is not well-defined, and instead is considered to be one of the many conditions related to chronic testicular pain.

Mr. Vice-Chancellor, in my years of practice, I have seen so many young men with Azospermia following Gonococcal-orchitis. These young men may never be fathers except they marry unfaithful wives. We however, made attempts to make some of them happy through artificial insemination. But then what is the moral justification of these procedures?



Fig. 4: Gonococcal epididymorchitis

Non-Gonococcal Urethritis (NGU)

Sexually transmitted urethritis in men may either be of gonococcal or non-gonococcal origin. The incidence of non-gonococcal urethritis (NGU) has risen more rapidly than that of gonorrhoea and it is now recognized as the most common sexually transmitted disease worldwide. Although there is a dearth of information on the prevalence of NGU in Nigeria, my colleagues and I have been able to show that Non-gonococcal urethritis accounts for over 60% of all cases of urethritis. It has been reasonably established that *Chlamydia trachomatis* is the most common sexually transmitted genital pathogen and is found to cause over 50% of NGUs. *Ureaplasma urealyticum* accounted for over 30%, while less common agents such as *Candida albicans*, Herpes simplex virus and *Gardnerella vaginalis* accounted for less than 1% of cases. We have also been able to show that *Trichomonas vaginalis* accounted for 8.4% of all NGU cases as far back as 1989.

The incidence of *Chlamydia trachomatis* infection in men has not been well-defined in our environment since the infections are not officially reported or microbiologically confirmed. However, those that were excluded for gonococcal urethritis by microscopic examination and culture were treated for Chlamydia and Ureaplasma urethritis, both being sensitive to tetracycline which is now obsolete in the treatment of these infections.

Urethritis caused by *Chlamydia trachomatis* is more often asymptomatic compared with gonococcal urethritis and when symptoms occur, they are milder with *Chlamydia trachomatis*. While there are well-established diagnostic screening procedures in developed countries for *Chlamydia trachomatis*, cases of urethritis due to this agent are still being diagnosed by exclusion in Ibadan.

In one of my research efforts in company of others, the incidence of Chlamydial infection in patients with urethritis was determined using a qualitative amplified enzyme-linked immunoassay (IDEIA T.M Chlamydia test). Of the 289 male patients with symptoms and signs suggestive of urethritis that were investigated for *Chlamydia trachomatis* as a cause of

non-gonococcal urethritis (NGU), ninety-one (31.49%) of the 289 male patients investigated had gonococcal urethritis, whilst 198(68.51%) had NGU out of whom 112(56.60%) had Chlamydial urethritis and 14(7.1%), Trichomonal urethritis.

The age range of peak incidence among the patients investigated was 20-29 years. Thirteen of the men treated for gonorrhoea still had watery urethral discharge and irritation and were diagnosed as having post-gonococcal urethritis (PGU), 11 (84.6%) of whom had *C. trachomatis* demonstrated in their urethral swabs.

Table 1: Incidence of *Chlamydia Trachomatis* in Men with NGU (N=198)

Diagnosis	Number	Percent
<i>C. trachomatis</i> urethritis	112	56.6%
Trichomonal urethritis	14	7.1%
Non-specific urethritis	72	36.3%
Total	198	100%

Table 2: Incidences of *Chlamydia Trachomatis* in Men with NGU and Gonorrhoea

Diagnosis	Number	Chlamydia-positive	
		Number	Percent
NGU	198	112	56.6%
Gonorrhoea	91	11	12.09
Control group	30	2	6.7%

P<0.001

Table 3: Age Distribution of Patients with Chlamydia Positive Urethritis

Age (in years)	Number	Percent	No positive for C. trachomatis	Percent
10-19	27	9.3%	13	11.6%
20-29	156	54.0%	74	66.0%
30-39	69	23.9%	18	16.1%
40-49	24	8.3%	6	5.3%
50 and above	13	4.5%	1	0.9%
Total	289	100%	112	100%

Trichomonal Urethritis

Trichomonas vaginalis has been incriminated as one of the common sexually transmitted genital pathogens and is responsible for approximately 20 percent of all cases of non-gonococcal urethritis. Trichomoniasis is widely distributed all over the world and remains a common infection among female patients attending sexually transmitted infection clinics.

In spite of the fact that the presence of *Trichomonas vaginalis* in the male urinary tract was discovered as early as 1883 by Kunstler, there has been scanty information on its prevalence in male patients probably due to the large number of asymptomatic cases, inadequacy of microscopy in the diagnosis, as well as the self limiting nature of the infection. While majority of female patients harbouring this organism present with vaginal discharge which is usually frothy, greenish-yellow and offensive, the infection in the male may give rise to no symptom or present as low-grade non-gonococcal urethritis. Again, in one of our studies, 8.4% of men investigated both by microscopy and culture had Trichomonal urethritis.

Herpes Simplex Virus

The role of Herpes simplex virus in the aetiology of urethritis was also established in Nigeria by Oni, Bakare et al. Herpes

simplex virus was isolated from 6.6% of the urethral swabs of the male patients investigated.

Genital Ulcer Disease

Genital ulcer disease is a syndrome characterized by ulcerating lesions on the penis, scrotum, vulva, vagina, perineum, or perianal skin. The most commonly identified pathogens are HSV types 1 and 2 (HSV-1, HSV-2), *Treponema pallidum*, *Haemophilus ducreyi*, *Chlamydia trachomatis* and *Calymmatobacterium granulomatous*.

Since the early 1990s the prevalence of chancroid in sub-Saharan Africa has decreased dramatically, while the HSV-2 infection has increased. This change must have been related to more widespread use of antibiotics and syndromic treatment of STDs. GUD has assumed increased importance in view of its well-recognized role in facilitating HIV transmission.

Genital Herpes

Acute genital herpes infections are followed by long periods of latency then reactivation. The disease usually has a prodrome of itching or burning, associated with a localized erythematous patch. Vesicles measuring about 1-3 mm then appear. Spontaneous rupture of the vesicles results in painful, superficial ulcerations or erosions. Lesions are usually multiple and are commonly found on the glans, prepuce, and penile shaft in men and on the vulva and cervix in women. The initial ulceration resolves within 10-14 days.

Initial symptom of genital herpes usually is pain or itching, beginning two to 10 days after exposure to an infected sexual partner. After several days, small, red bumps may appear. They then rupture, becoming ulcers that ooze or bleed. After three to four days, scabs form and the ulcers heal.

Genital herpes is different for each person. The signs and symptoms may recur for years. Some people experience numerous episodes each year. Many men experience mild symptoms, which resolve spontaneously. Others develop severe bouts of painful blisters on the penis that can be

accompanied by fever and headache. Various factors may trigger outbreaks of HSV ulcers, including: stress, menstruation, poor nutrition, illness, surgery, friction (such as that caused by vigorous sexual intercourse). Genital infection with HSV may be differentiated into first recognized episodes, primary first episode, non-primary first episode, recurrent episode, and subclinical shedding.



Fig. 5a: Genital herpes with superimposed bacterial infection



Fig. 5b: Herpes labialis

Syphilis

Syphilis is a systemic infectious condition caused by *Treponema pallidum*. The first manifestation of infection is characterized by development of chancre. The Classic chancre is a single painless, non-tender, indurated ulcer with a clean base, a heaped-up, or rolled margin and an accompanying inguinal adenopathy. However, presentation may be atypical in HIV-infected patients where multiple ulcers may occur. The incubation period average about 3 weeks from time of exposure. Chancre usually (but not always) precedes development of secondary symptoms. Chancre typically resolves in 3 -6 weeks without treatment.

The rash of any type in a sexually active individual should be considered as potential syphilis until proved otherwise. In most cases rashes of secondary syphilis do not present as ulcerative lesions. The only exceptions are the perineal lesions of the condylomata lata and mucous patches of the oropharyngeal area. Latent syphilis is clinically inapparent, the only evidence of infection is a reactive serologic test. Other manifestations include cardiovascular syphilis and neurosyphilis.



Fig. 6: Primary chancre of the penile shaft (syphilis)

Chancroid

Patients seek care for an ulcer that has been present for 1-3 weeks. Chancroid ulcers are usually painful, generally larger than chancre, or herpetic lesions. They are also likely to be

multiple. The soft chancre of chancroid is classically described as well circumscribed and non-indurated with ragged edges and a necrotic base with purulent base which bleeds when scraped. Chancroid is often associated with intercourse with commercial sex workers. In contrast to genital herpes and syphilis untreated chancroid ulcers can persist for so many years and can lead to auto-amputation of the penis.



Fig. 7a: Chancroid in a male with erosion of the glans penis



Fig. 7b: Chancroid in a female (multiple ulcers)



Fig. 7c: Chancroid in a male with auto-amputation

Genital warts

HPV is one of the most common STI pathogens and is the cause of genital wart (*Condylomata acuminata*), anogenital dysplasia and invasive cervical cancer. Oral warts may also occur as a direct consequence of HPV infection during sexual activity. At least 75 percent of sexually active men and women acquire more than one or more genital HPV types at some points in their lifetime. Many infected persons have subclinical disease or regression of the disease before it becomes clinically apparent.

There are more than 100 different HPV types. More than 40 of these types can cause anogenital lesions. HPV types 6 and 11 are associated with external genital warts and they have low risk of malignant transmission. Types 16, 18, 31, 33, and 35 have a strong association with cervical and other anogenital cancers. High-grade HPV - associated disease such as cervical intraepithelial (CIN) types 2 and 3 are likely the direct precursors to invasive cancer. These are the target of screening programmes that utilize the Papanicolaou (Pap) test.

External genital warts appear as characteristics well-circumscribed exophytic papules that may be pedunculated. Genital warts can be seen on the scrotum and perineum as well as intra-anal area. Among women, most lesions are found in the posterior introitus, the labia majora and minora.



Fig. 8a: Genital wart in a female



Fig. 8b: Anal warts in a 9-year old female

Lymphogranuloma Venereum (LGV)

Lymphogranuloma venereum (LGV) is caused by unique serovars of *Chlamydia trachomatis* (L1, L2, L3) that are unlike those that typically cause urethritis, cervicitis, and proctitis (D-K). Its presentation varies depending on the site of infection. The incubation period is between 3 days and 1 month after exposure.

LGV is an invasive, systemic infection that progresses in three stages. The primary (ulcer) stage is marked by the formation of a painless vesiculo-papular ulceration that resembles a herpes lesion at the site of inoculation. The ulcer heals on its own in few days. The secondary stage (lymphatic stage) is characterized by painful swelling of the inguinal lymph nodes. Inflammation of lymph nodes persists, a bubo develops and the entire groin and external genitalia become swollen. The tertiary stage (lymph edema stage) of LGV occurs years later, if the patient is not treated promptly and effectively in earlier stages. Rectal narrowing, permanent elephantiasis of the genitalia accompanied by thickening of the skin may also occur.

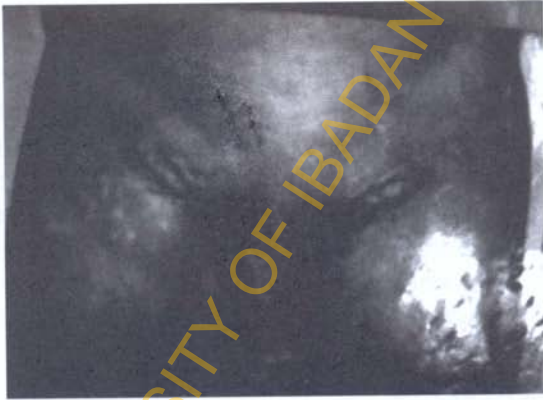


Fig. 9a: Bilateral lymphogranuloma venerum in a male



Fig. 9b: Chronic lymphogranuloma venereum in a female (Genital elephantiasis)

Donovanosis

This is a rare condition caused by *Calymmatobacterium granulomatous*. The typical ulcerative form of Donovanosis is beefy, red, and bleeds easily when touched. The lesion may also be hypertrophic, usually raised above the surrounding skin and become verrucous in appearance. It is generally non painful. It could also cause “kissing lesions” i.e. on areas of the skin in contact with each other, such as bilateral labia.

Fixed Drug Eruption

This is a localized lesion that occurs in response to a medication, generally an oral medication that is used intermittently. FDE may involve any parts of the skin and the genitalia are usually affected. They are often more solitary, well-circumscribed plaques; but they usually become ulcers, which may be painful and mimic herpes genitalis.



Fig. 10: Fixed drug eruption on a male phallus

Mr. Vice-Chancellor Sir, permit me at this point to talk briefly about a special group of people who are particularly at a high risk of STIs.

Commercial Sex Workers

Commercial sex workers (CSWs) have held a time-honoured position in STDs control, both as major reservoirs of the disease and as a convenient, untraceable source of infections. Evidence that CSWs may play a significant role in the spread of STDs such as gonorrhoea is accumulating. There was no comprehensive or reliable data on the prevalence of STDs among commercial sex workers in Nigeria, however, evidence from studies in other countries show that it is quite high. Osoba reported a prevalence of gonococcal infection among the CSWs to be 15.8 percent. Various studies on commercial sex workers in Asia and Africa have also reported a high prevalence of STDs among them.

The arrival on the scene of HIV—which is sexually transmitted in about 80 percent of cases—has worsened the situation because, while the conventional STDs such as gonorrhoea and syphilis are treatable, HIV/AIDS is fatal and currently has no cure. This will no doubt constitute a serious

health problem considering the number of commercial sex workers operating in many of the brothels in Ibadan.

My colleagues and I conducted a study to determine the pattern of STDs among commercial sex workers (CSWs) in Ibadan, Nigeria. The subjects were 169 CSWs randomly selected from 18 brothels, majority of who were examined and investigated in their rooms. Another 136 women without symptoms who visited the special treatment clinic, University College Hospital, Ibadan were selected as a normal control group. Vaginal candidiasis was the most common STD diagnosed in both CSWs and the control group. The other STDs in their order of frequency were HIV infection 34.3%, non-specific vaginosis 24.9%, trichomoniasis 21.9%, gonorrhoea and "genital ulcers" had an incidence of 16.6% each. Other important conditions were tinea cruris 18.9%, scabies 7.7%, genital warts 6.5% and 4.1% of them had syphilis sero-positivity. All the 13 CSWs that had scabies, 4 (36.4%) with genital warts and 19(67.9%) with "genital ulcers" also had HIV infection. While there was no significant difference between the CSWs with vaginal candidiasis, gonorrhoea, trichomoniasis and the control group, the HIV positivity was significantly higher ($P < 0.001$) in CSWs than in the control subjects. These findings suggest that women who exchange sexual services for money can no longer be ignored, and should therefore be identified and made to participate in STD prevention and control programmes.

Male Prostitution

Male prostitution is the act or practice of men providing sexual services to another person in return for payment, as opposed to prostitution, which can refer to any gender. Compared to female sex workers, male sex workers have been far less studied by researchers, and while studies suggest that there may be differences between the ways these two groups look at their work, more research is needed. Male prostitutes are known by various names including "male escorts", "gigolos", "rent-boys", "hustlers", "models" or

“masseurs” (although the words “hustler”, “model”, and “masseur” do not always refer to prostitutes). The term “rent-boy” may be derived from the boys “renting” themselves out. A man who does not regard himself as gay, but who is prepared to have sex with male clients for money, is sometimes called “gay for pay” or “rough trade”. Male prostitutes offering services to female customers are sometimes known as “gigolos” (men who have continuing sexual relationship with and receive financial support from women, especially older women).

My Vice-Chancellor, permit me to quote an advert on *Nigeria Gigolo.com* on how they source for their clients.

Hello madam

*I am Victor Manuel. Are you a woman interested in having fun? I mean sex, this is for you. We are a gigolo service that is concerned about your happiness and satisfaction. Once you come in contact with one of our men which are between the ages of 19-25, you will remain ever happy. Our boys are agile and very good. So please if u are interested in our gigolo service contact me via 0802-**** Please note that this service is only for women in Nigeria.*

*Contact: ***** or *****@yahoo.com”*

We actually met many of these boys at various brothels in Ibadan during our study on sex workers.

Men who have Sex with Men (MSM)

Sub-groups of MSM are at high risk of HIV infection and other viral and bacterial STDs. The frequency of unsafe sexual practices and the reported rates of bacterial STDs and incidents of HIV infection declined substantially in MSM from the 1980s through the mid-1990s. However, since that time, increased rates of early syphilis (primary, secondary, or early latent), gonorrhoea, and chlamydial infection and higher

rates of unsafe sexual behaviors have been documented among MSM in the United States and virtually all industrialized countries. The effect of these behavioural changes on HIV transmission has not been ascertained, but preliminary data suggest that the incidence of HIV infection is increasing among MSM in some urban centers, particularly among MSM from racial and ethnic minority groups and among those who use nonprescription drugs during sex, particularly methamphetamine and volatile nitrites (also known as "poppers"). These adverse trends likely reflect the following: (1) changing attitudes concerning HIV infection that have accompanied advances in HIV therapy, resulting in improved quality of life and survival for HIV-infected persons; (2) changing patterns of substance abuse; (3) demographic shifts in MSM populations; and (4) changes in sex partner networks resulting from new venues for partner acquisition (e.g., the Internet).

Due to the increased incidence of anal cancer in HIV-infected MSM, screening for anal cytologic abnormalities must be considered; however, evidence is limited concerning the natural history of anal intraepithelial neoplasias, the reliability of screening methods, the safety and response to treatments, and the programmatic support needed for such a screening activity. More frequent STD screening (i.e., at 3–6-month intervals) is indicated for MSM who have multiple or anonymous partners. In addition, MSM who have sex in conjunction with illicit drug use (particularly methamphetamine use) or whose sex partners participate in these activities should be screened more frequently.

All MSM should be tested for HBsAg to detect HBV infection. Prompt identification of chronic infection with HBV is essential to ensure necessary care and services to prevent transmission to others. HBsAg testing should be made available in STD treatment settings. In addition, screening among past or current drug users should include HCV and HBV testing. Vaccination against hepatitis A and B is recommended for all MSM in whom previous infection or vaccination cannot be documented.

Women who have Sex with Women

Women who have sex with women (WSW) are a diverse group with variations in sexual identity, sexual behaviours, sexual practices, and risk behaviours. Recent studies indicate that some WSW, particularly adolescents, young women, and women with both male and female partners, might be at increased risk for STDs and HIV as a result of certain reported risk behaviours. WSW are at risk for acquiring bacterial, viral, and protozoal infections from current and prior partners, both male and female. WSW should not be presumed to be at low or no risk for STDs based on sexual orientation. Effective screening requires that providers and their female clients engage in a comprehensive and open discussion not only about sexual identity, but sexual and behavioural risks.

Few data are available on the risk for STDs transmitted by sex between women, but risk probably varies by the specific STD and sexual-practice e.g. oral-genital sex, vaginal or anal sex using hands, fingers, or penetrative sex items, and oral-anal sex. Practices involving digital-vaginal or digital-anal contact, particularly with shared penetrative sex items, present a possible means for transmission of infected cervico-vaginal secretions. This possibility is most directly supported by reports of metronidazole-resistant trichomoniasis and genotype-concordant HIV transmitted sexually between women who reported these behaviours and by the high prevalence of BV among monogamous WSW.

Transmission of HPV can occur with skin-to-skin or skin-to-mucosa contact, which can occur during sex between women. HPV DNA has been detected through polymerase chain reaction (PCR)-based methods from the cervix, vagina, and vulva in 13%–30% of WSW, and high- and low-grade squamous intraepithelial lesions (SIL) have been detected on Pap tests in WSW who reported no previous sex with men. However, most self-identified WSW (53%–99%) report having had sex with men and indicate that they might continue this practice in the future. Therefore, routine cervical cancer screening should be offered to all women, regardless

of sexual preference or sexual practices, and women should be offered HPV vaccine in accordance with current guidelines.

Limited data demonstrate that HSV-2 genital transmission between female sex partners is probably inefficient but can occur. The relatively frequent practice of orogenital sex among WSW might place them at higher risk for genital infection with herpes simplex virus type 1 (HSV-1), a hypothesis supported by the recognized association between HSV-1 seropositivity and number of female partners among WSW.

Although the rate of transmission of *C. trachomatis* between women remains largely unknown, infection also can be acquired from past or current male partners. Recent data suggest that *C. trachomatis* infection among WSW might be more common than previously thought; transmission of syphilis between female sex partners (likely through oral sex) also has been reported. Therefore, report of same-sex behaviour in women should not deter providers from screening these women for STDs, including chlamydia and syphilis, as recommended.

Prevention and Control

Abstinence and Reduction of Number of Sex Partners

A reliable way to avoid transmission of STDs is to abstain from oral, vaginal, and anal sex or to be in a long-term, mutually monogamous relationship with an uninfected partner. For persons who are being treated for an STD (or whose partners are undergoing treatment), counselling that encourages abstinence from sexual intercourse until completion of the entire course of medication is crucial.

Male Condoms

When used consistently and correctly, male latex condoms are highly effective in preventing the sexual transmission of HIV infection. In heterosexual serodiscordant relationships (i.e., those involving one infected and one uninfected partner) in which condoms were consistently used, HIV-negative partners were 80% less likely to become HIV-infected compared

with persons in similar relationships in which condoms were not used. Moreover, studies have shown that condoms can reduce the risk for other STDs, including chlamydia, gonorrhoea, and trichomoniasis; by limiting lower genital tract infections. Condoms also might reduce the risk for women developing pelvic inflammatory disease (PID). In addition, consistent and correct use of latex condoms also reduces the risk for genital herpes, syphilis, and chancroid when the infected area or site of potential exposure is covered, although data for this effect are more limited.

Cohort studies have demonstrated that condoms protect against the acquisition of genital HPV infection. A prospective study among newly sexually active women who were attending college demonstrated that consistent and correct condom use was associated with a 70% reduction in risk for HPV transmission. Use of condoms also appears to reduce the risk for HPV-associated diseases (e.g., genital warts and cervical cancer) and mitigate the adverse consequences of infection with HPV. Condom use has been associated with higher rates of regression of cervical intraepithelial neoplasia (CIN) and clearance of HPV infection in women and with regression of HPV-associated penile lesions in men.

We studied the pattern of condom use among commercial sex workers in Ibadan, Nigeria in an attempt to identify the factors associated with it. Two hundred and ninety-five commercial sex workers in 21 brothels were randomly selected, using a multi-stage sampling technique, from a total of 31 identified in the 5 local government areas that make up Ibadan municipality. They were administered a pre-tested, semi-structured questionnaire by trained research assistants. Results showed that over half (53.2%) of the respondents were in the 20-29 years age group and most (71.5%) had been in the profession for less than a year. Sixty-five (22.0%) had no formal education, 29.8 % had some secondary education while 22.4 % had completed secondary school. Their overall knowledge of sexually transmitted diseases (STDs) was rated as poor (20.7%), moderate (64.1%) and good (15.2%). Their perceived risk of contracting HIV/AIDS was low (21.7%),

although 87.8% regarded it as a major health problem in Nigeria. Eighty-three percent of the respondents always insisted that their clients used condoms, 13.2% did so frequently while, 1.4% used it only occasionally. Of those who asked clients to use condoms, 69.5% of the women would refuse sex without condoms, 49 (16.6%) would do nothing and have sex without condoms, but 4.4% would charge extra money. No factor was found to have a significant association with the practice of asking clients to use condoms or of refusing sex without condoms. We concluded that consistent condom use was high among sex workers in brothels in Ibadan and was independent of the sex workers knowledge and perception of STDs.

Cervical Diaphragms

In observational studies, diaphragm use has been demonstrated to protect against cervical gonorrhoea, chlamydia, and trichomoniasis.

Topical Microbicides

Topical microbicides are products that are designed to inhibit the sexual transmission of HIV and other sexually transmitted infections (STIs). Microbicides could potentially be applied vaginally to prevent both male-to-female and female-to-male transmission; by offering a female-controlled prophylactic option, a microbicide would be an important addition to the prevention toolkit. Heterosexual contact accounts for the majority of all human immunodeficiency virus (HIV) infections worldwide, and clear need exists for new technologies to prevent the sexual transmission of HIV. Despite years of effort, an effective HIV-1 vaccine remains elusive. Correct and consistent male condom use has been shown to prevent HIV-1 transmission, but women are often unable to obligate or negotiate the use of condoms by their male partners. Additional strategies to prevent the spread of HIV, particularly for women who are at high risk for HIV acquisition, are crucial. Unfortunately, no clinical studies to date

have demonstrated that these products can prevent HIV infection. I was the Principal Investigator for a Clinical Trial of a Microbicide (SAVVY) in Ibadan from the years 2004 to 2007.

The objective of the trial was to determine the effectiveness of 1.0% C31G (SAVVY) in preventing male-to-female vaginal transmission of HIV infection among women at high risk. This was a Phase 3, double-blind, randomized, placebo-controlled trial. Participants made up to 12 monthly follow-up visits for HIV testing, adverse event reporting, and study product supply. The study was conducted between September 2004 and December 2006 in Lagos and Ibadan, Nigeria, where we enrolled 2153 HIV-negative women at high risk of HIV infection. Participants were randomized 1:1 to SAVVY or placebo. The effectiveness endpoint was incidence of HIV infection as indicated by detection of HIV antibodies in oral mucosal transudate (rapid test) or blood (ELISA), and confirmed by Western blot or PCR testing. We observed 33 seroconversions (21 in the SAVVY group, 12 in the placebo group). The Kaplan-Meier estimates of the cumulative probability of HIV infection at 12 months were 0.028 in the SAVVY group and 0.015 in the placebo group (2-sided p-value for the log-rank test of treatment effect 0.121). The point estimate of the hazard ratio was 1.7 for SAVVY versus placebo (95% confidence interval 0.9, 3.5). Because of lower-than-expected HIV incidence, we did not observe the required number of HIV infections (66) for adequate power to detect an effect of SAVVY. Follow-up frequencies of reproductive tract adverse events, abnormal pelvic examination findings, chlamydial infections and vaginal infections were similar in the study arms. No serious adverse event was attributable to SAVVY use. We therefore concluded that SAVVY (Topical Microbicides) did not reduce the incidence of HIV infection. Although the hazard ratio was higher in the SAVVY than the placebo group, we could not conclude that there was a harmful treatment effect from the use of SAVVY.



Fig. 11: One of my co-investigators for SAVVY Project



Fig. 12: The Bodija Clinic for Ibadan SAVVY Project



Fig. 13: My partners for the SAVVY Project

Safer-Sex Recommendations

General Risk-Reduction Strategies

Decisions about Sexual Activity

Because sexual contact is the major transmission route for HIV and other sexually transmitted infections, eliminating sexual contact eliminates risk of transmission by this route. Abstinence, though, neither desirable nor practicable for many people, remains an important option to be seriously considered.

Decisions about Partner Selection

Sexual contact with many persons increases the probability of coming in contact with an HIV-infected partner. Thus, one risk-reducing strategy to consider is a reduction in the number of sexual partners. Because it is not always possible to know with certainty if a sexual partner is infected, an additional approach is to choose a partner who is at low risk of being HIV infected and then practice safer-sex techniques with that partner.

Decisions about Specific Sexual Practices

Evidence shows that some sexual practices are associated with a greater risk of transmission than others. Proper use of barrier methods can reduce the risk of transmission associated with many of these practices. Thus, decision-making about safer sex involves choices about specific sexual practices in addition to choices about partner selection.

Specific Risk-Reduction Strategies

Sexual Practices and Associated Risk of HIV Transmission

- Safer sex: extremely low- or no-risk practices.
 - Self-masturbation.
 - Touching, massaging, hugging, caressing.
 - Social (dry) kissing.
- Probably safe: very low-risk practices (small theoretic risk).
 - French (wet) kissing.
 - Mutual masturbation (if no cuts on hands, or ulcers or lesions on genitals of either partner).
 - Vaginal sex with a male or female condom (put latex or polyurethane condom in place before any penetration).
 - Fellatio with condom (place latex condom on partner's penis before oral contact).
 - Cunnilingus with dental dam (place latex dam over partner's vaginal area before oral contact).
 - Anilingus (rimming) with dental dam (place latex dam over anus before oral contact).
 - Contact with urine (water sports; only with intact skin, avoid contact with mouth).
 - Using one's own sex toys (no sharing of any toys that contact body fluids).
 - Anal sex with condom (place latex condom on penis prior to penetration, probably safer with use of ample water-based lubrication).

- Possibly unsafe: no strong proof, but some evidence that transmission can occur.
 - Fellatio (sucking partner's penis and swallowing semen).
 - Cunnilingus (oral contact with partner's genital area and vaginal secretions).
 - Anilingus without a latex dam.

- Unsafe sex: high risk of transmitting HIV.
 - Anal intercourse without a latex condom (highest risk is to the receptive partner).
 - Anal penetration with the hand (fisting) or other rectal trauma without a latex glove or fisting followed by anal intercourse.
 - Anal douching in combination with anal sex.
 - Vaginal intercourse without a male or female condom.

In Conclusion

My Vice-Chancellor Sir, I believe by now my audience will appreciate the fact that *venereal diseases are diseases and not crimes*. Venereal diseases should no longer be regarded as shameful, abhorrent evidence of an individual's degraded moral character. Indeed there is no romance and no love affair between the sexually transmitted infections and the victim's moral character.

Only God knows what can happen between two members of the opposite sex when left to themselves behind a well-locked door. In a public lecture by Professor Wole Soyinka, he said and I quote, "Just to remind you of the case of Adam and Eve. Consider the conduct of those two adults, alleged primogenitors of humanity. The tempting serpent should be read as a metaphor—there was no actual serpent as such in the Garden of Eden—if ever such a garden itself did exist. The serpent merely symbolized the hidden desire between two members of the opposite sex!"

Since sexual contact is the major transmission route for HIV and other sexually transmitted infections, eliminating

sexual contact eliminates risk of transmission by this route. Abstinence, though, neither desirable nor practicable for many people, remains an important option to be seriously considered.

Mr. Vice-Chancellor, ladies and gentlemen, what I have discussed today openly is what many people will not likely want to talk about and would rather keep their problems to themselves. Even after this lecture there will still be some people who prefer to remain silent on their predicament. Kindly contact me privately in order to share your worries, it is always good to talk to the expert, I can assure you that your secret would be kept secret.

Acknowledgements

My Vice-Chancellor Sir, ladies and gentlemen, first and foremost, my unquantifiable gratitude goes to Almighty Allah, my Creator and my main source of inspiration. To Him be all the glory, honour and adoration for His mercies upon me and my family. Indeed He has fulfilled His promise. My life is a great lesson to all humanity. God has truly chosen to bless me abundantly in reward for my patriotism, loyalty and ardent belief in Him. *ALHAMDULILAH*.

My most sincere gratitude goes to my parents, Alhaji and Alhaja Lasisi Bakare both of blessed memory for their love and disciplined upbringing. I thank my Uncle, Late Alhaji Tijani Bakare who gave me the opportunity of formal education, without whom I would be no one today. I am grateful to my teachers, too numerous to mention over the past four decades. I must specifically mention Professor Abimbola Olu Osoba, a teacher of teachers and a great lover of STI, my mentor and a great source of inspiration to me.

I want to thank fellow clinical microbiologists, both at home and abroad. My acquaintance with eminent microbiologists like Professor Tolu Odugbemi and Professor Boaz Adegboro has made a better person out of me. Indeed I have been able to stand tall by leaning on the shoulders of giants in my Professor. I have also enjoyed a very good relationship

with fellow pathologists like Professor Aken'Ova, my sister and friend, my good friend Professor J. Olufemi Ogunbiyi, you have been amazing.

I also wish to acknowledge the support of my colleagues in the Department—Dr. Anthony Alaba Oni who has also been very supportive and has contributed significantly towards the success of this inaugural lecture. Dr. Oni was my classmate in the Medical School. Many thanks to my other colleagues for the good working relationship over the years gone by, Dr. Abiola Okesola, Dr. Aderemi Kehinde, Dr. Hannah Dada Adegbola and Mrs. Funke Oluwatoba. I wish to thank my very good friend and colleague in person of Dr. Adetona Fayemiwo. His enthusiasm and keen interest made the preparation of this lecture an easy one for me. His unalloyed loyalty and unwavering support has been a motivating factor that kept me going on several occasions. The joy of a successful academic lies in his ability to look back and be able to see his academic children, who are the fruits of his hard labour. Today, I am a happy man because I have reproduced myself in the field of Venereology. I am also very delighted that even if I retire from Medical Microbiology Department, UCH/UI Ibadan today, I have left behind a most capable replica of myself in person of Adetona Fayemiwo.

At a meeting of pathologists in Ilorin in the year 2006, I met this very young lady, then a junior resident in the Department of Medical Microbiology, UITH, Ilorin. She presented a scientific paper and I was very impressed at her eloquence and confidence. I was to meet her again two years later at the National Postgraduate exams where she not only impressed me, but all of us who had an encounter with her. I made up my mind there and then that this kind of brilliance should not be domiciled anywhere else but here in Ibadan. For this reason, her CMD in Ilorin and my colleague in Abuja are yet to forgive me. Adeola Fowotade is an asset not only to the Department of Medical Microbiology in Ibadan but to anyone close enough and humble enough to recognize a budding star. I am grateful to God for the opportunity of

coming across this gem. Her contribution to the preparation of this lecture is unquantifiable.

I have also continued to learn from my children and protégés: Dr. OO, Olusanya, Dr. VU, Nwadike, Dr. AM, Olugbeminiyi, Dr. CG, Okoye, Dr. B. Tayo, Dr. MM, Manga, Dr. TA, Ajani and Dr. KE, Tuta. You are the reason why I am still here. I owe a huge debt of thanks to Professor Babatunde Salako and Dr. Akeem Lasisi, for painstakingly reading through the lecture and offering useful suggestions. I am indeed very grateful.

My sincere gratitude also goes to the members of Rotary Club of Ibadan, Ibadan Recreation Club (1902) table tennis section, The Diplomats, Wednesday Social Club, Abeokuta Grammar School Old Students Association (AGSOBA), Oluyole Extension Residents' Association, among others. To all my patients, both living and dead, whose pictures you have been looking at, most especially the commercial sex workers (both males and females) on the streets as well as brothels all over Ibadan, you are the reason why I am a professor today.

Lastly, I like to acknowledge the support of my darling wife, Alhaja Sarat Motunrayo Bakare, your patience, tolerance and kind understanding of the nature of my work is the reason why I am an achiever today. Indeed I owe my successful career to your wonderful and unrivalled support. I also appreciate my three lovely sons and wonderful daughter: Ayobamidele, my twins Temitayo and Temitope as well as Tomilayo the only undergraduate, currently studying computer information at Babcock University, Ilisan. Being a father to you all has given me the greatest joy ever.

The Vice-Chancellor, ladies and gentlemen, this is my story. I thank you all for being here this evening to honour me. May the Lord honour and bless you all. Amen.

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APPENDIX



**Professor A.O. Osoba
(Grandfather of Venereology)**



The Clinic



The Clinic



The Clinic

BIODATA OF PROFESSOR RASHEED AJANI BAKARE

Professor Rasheed Ajani Bakare was born 5th February, 1953 to late Alhaji and Alhaja Bakare of Kemta, Abeokuta South Local Government, Ogun State. He had his primary education at Ahmadiyya Primary School, Abeokuta between 1960 and 1965. Thereafter, he attended Abeokuta Grammar School between 1968 and 1972 for his secondary education where he further obtained his Higher School Certificate (HSC) education in the year, 1974. He then proceeded to the prestigious University of Ibadan, where he obtained a MB; BS degree in July, 1981.

He had his internship at the University College Hospital, Ibadan in 1981/1982 and National Youth Service Corps at Ikire between 1982 and 1983. He started his residency training at the University College Hospital, Ibadan in August, 1983. He became a Fellow of the Nigerian Postgraduate Medical College (Pathology) in the year 1990 and a Fellow of the West African College of Physician (Laboratory Medicine) in 1995. He was appointed Lecturer 1 on the first of January, 1991 and Honorary Consultant to the University College Hospital the same day. He was promoted senior lecturer in October, 1996. He obtained his Chair in the Department of Medical Microbiology in October, 2002.

He was appointed Clinical Head of Department of Medical Microbiology in the years 1994 to 1997 and was also acting Head of Department for several years. He became the substantive Head of Department from 2004 to 2011. He was appointed Principal Investigator for Ibadan SAVVY project (A multicentre Microbicide trial sponsored by USAID and monitored by FHI North Carolina, USA) between 2004 and 2007. He is a recipient of several grants including the SOARS study sponsored by Glaxosmithkline. He has also enjoyed several International travel Fellowship from several Multi-national Drug Companies.

He has been and still remains External examiner to virtually all the Medical Schools in Nigeria. He has also been involved in supervision and examination of postgraduate students including resident doctors and PhD candidates. He was recently appointed by the FMOH as the Chairman of the Technical Working group for Sexually Transmitted Infections in Nigeria. Prior to this he has been a member of the group since 1996. He has also participated in accreditation programme in Laboratory Medicine both within and outside the country. His honors, distinctions and memberships of learned Professional bodies include the Nigerian Medical Association. He has also been the President of the Nigerian Venereal Disease Association (NIVEDA) between 1997 and 2007. He received recognition of service award from the UCH, Ibadan after his tenure as Deputy Chairman, MAC (Laboratory Services) from 2007 to 2011. He is a 1 star Paul Harris Fellow and also a recipient of several recognition awards from the Rotary International.

Professor R.A. Bakare is a Venereologist of high repute and has made significant contribution to the field of Venereology in Nigeria. A widely travelled man, attending both local and international conferences and workshops, he has published more than 60 journal articles in both local and international journals. He is the Editor-in-Chief of the Nigerian Journal of Genitourinary Medicine. He is happily married to Alhaja Sarat Motunrayo Bakare and the union is blessed with four wonderful children.