Practising obstetrics and Gynaecology in areas with a high prevalence of HIV infection

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What is it like to practice obstetrics gynaecology in a country with a high prevalence of HIV infection? My experience relates especially to Zimbabwe, but the same factors apply equally well to Zambia, Zaire, Uganda, Kenya, Tanzania, Malawi and Mozambique. Within a population of 11 million in Zimbabwe, at least 1 million are HIV positive according to the official figures. AIDS often means “home-based care”; the nearest clinic or hospital, which has very little to offer, may be 3 hours away per wheelbarrow. Many patients who die with chronic diarrhoea lack a piped water supply nearby, an indoor toilet, or even a waterproof sheet.

Every year in Zimbabwe there are 120,000 confinements of HIV-positive women compared with 7000 HIV-positive pregnancies in the USA. Transmission of the virus in Africa is mainly heterosexual and vertical, although blood transfusion still plays a part. Intravenous drug use is not a problem but alcohol is, by way of promoting risky behaviour. A secondary epidemic of tuberculosis (TB) (also among HIV-negative persons) adds to the difficulties in sub-Saharan Africa.

**Testing**

Patients seldom request an HIV test, and many blood donors have stopped volunteering because they do not want to know. Testing is done, in some cases without the patient’s knowledge, in cases of severe illness and in specific situations when knowledge of the HIV status influences management or increases understanding of the HIV disease. Although an infected individual might benefit from knowing that the test is positive, most patients have little control over their lives and cannot make plans for the future. Counselling, a magic imported word, does not work well where people are less individual and more defined as part of an extended family, which nevertheless could eject the individual should it come to know about her HIV status. Moreover, the health services could never cope with basic preventive care if it made a serious effort to track down HIV-positive patients. If a patient is tested and found positive should we send for the husband and offer him a test? 12 partners of the 146 women identified as HIV positive in one study from Rwanda refused testing, and 10 (7.5%) of the tested were found to be HIV negative. Within couples, HIV negativity in the man and positivity in the woman occurs especially if both partners are young. Will he abandon his wife and children and tell everybody why? She will need a new provider. Perhaps he will turn to another woman and become infected anyway? I know of “counsellors” who will not tell the husband that he is negative.

There are severe difficulties related to the diagnosis and management of infertility. To be infertile is an existential problem for the woman or couple involved. Gynaecologists often test for HIV before embarking on any other investigations. But how should we tell a woman that infertility is one of her least problems. Many couples stay
together if found to be HIV positive, but the additional burden of infertility may be intolerable. Culturally it is better to have had a baby even if the child died than never to have had a child. A widely held belief among nursing staff is that patients who are told that they are HIV positive give up and die much faster than those who remain ignorant of their condition.

Should patients be offered a test when HIV infection is suspected but the HIV status has no bearing on management—eg, in cases of herpes zoster, large condylomata acuminata, or Bell’s palsy in the third trimester of a pregnancy? Although offering a test sounds fair and democratic, the patient cannot then choose not to know that her herpes is likely to be HIV related. Should she communicate the doctor’s suggestion to her relations and risk rejection, even starvation or harbour her fears alone? When I did a survey in the United Bulawayo Hospitals in Zimbabwe, 10% of 250 gynaecological outpatients indicated that did not want the doctor to communicate his or her suspicion that HIV was involved if their were no therapeutic implications. I suggest that all patients at presentation at a health facility should be asked to indicate on a form whether they wish to be tested should the above situation arise.

**Gynaecology**

In gynaecological practice post-abortal sepsis, severe pelvic inflammatory disease, pelvic lymphadenitis, vulvovaginitis (often ulcerative), and tuberculous peritonitis are increasing. Some patients present with chronic vaginal bleeding and are found to have HIV-related thrombocytopenia. Amenorrhoea and infertility related to weight loss are more common. Recto-vaginal fistulae in sexually active women, unrelated to labour or trauma, and in under-fives are new. Conventional repairs of labour-related vesico-vaginal fistulae in HIV-positive patients and of the above mentioned recto-vaginal fistulae are often unsuccessful. There is an increase in the incidence and progression of cervical (pre)malignancies and timely detection and treatment becomes more difficult and time consuming, making much discussed national cervical screening programmes even more remote.

**Obstetrics**

Pregnant women in Africa are not screened for HIV for financial, psychological and practical reasons. The latest government sentinel surveys of antenatal clinics in Zimbabwe put the average prevalence of HIV infection at 24% in apparently healthy women. About 28% of the babies of infected mothers become infected in utero, 8% before and 20% during labour.
Breastfeeding, according to a meta-analysis, is responsible for another 14% of vertical transmission in established HIV infection\textsuperscript{10}. Thus about 42% of the babies of infected mothers who breastfeed become infected before, during and after labour. 14% (58% of 24%) of all mother/baby pairs will therefore be discordant at the time of weaning. These babies are at risk to become infected over and above the “natural” infection rate. The routine practices of health workers are worrying in this light. Take a typical example of a newborn baby, its face full of blood: although it is crying vigorously, the midwife pushes the blood up the baby’s nose with a suction catheter. The dangers are obvious and the practice is unnecessary.

The natural history of vertically acquired HIV infection is not yet clear in the developed world let alone in Africa. One study from Rwanda\textsuperscript{11} found that 19% of the babies of HIV-positive mothers had died of disease 2 years after delivery; this supports the widespread impression that survival time is shorter in Africa.

How to care for perinatal patients potentially infected with HIV is not made explicit in nurse/midwife training facilities or in medical schools. Moreover, provision of humanised milk for bottle feeding is out of the question. Humanised milk costs 200 Zimbabwe dollars a month (approx US$25). The minimum wage in Zimbabwe is Z$150 and the annual health budget Z$90 per person. If antenatal testing was offered, nearly one third of the Health budget would be needed if all HIV-positive mothers were to be provided with humanised milk for a year. Apart from that, bottle feeding would automatically stigmatise mothers, and there would be many unwanted pregnancies because of the loss of the contraceptive effect of breastfeeding. Every child, infected or not, is a potential responsibility for the community since the extended family - the social security system of Africa - is collapsing under the exponential increase in orphans. Another worthy cause. Even in Western Europe, where people sometimes risk imprisonment in their attempts to find children to adopt, to arrange for adoption of children whose mother died of AIDS is very difficult.

There is also an increase in puerperal sepsis, massive condylomata acuminata, fever related to TB or of unknown origin, often combined with wasting and maternal and perinatal mortality. Most of the infections are the usual type of postpartum or post caesarean complications, only more severe and more frequent. Unusual infections are also encountered -eg, peritonitis after a routine postpartum tubal ligation or a pubic osteomyelitis after spontaneous labour. A new feature is retention of urine caused by HIV-related damage to the nervous system. It is difficult to differentiate clinically between puerperal psychosis, cerebral malaria, and HIV-related cerebral complications such as toxoplasmosis, cytomegalovirus infection, lymphoma, HIV-encephalitis and cryptococcus meningitis, to name a few.
Suggested changes in obstetric practice

Blood transfusions should be given only when thought to be life saving; old habits in this area die very slowly. Protocols developed to prevent exchange of blood from a low-pressure system (the foetus) to a high-pressure system (the mother) in potential rhesus sensitisation are applicable in potential HIV infection up to the moment that the cord is clamped. External cephalic version and amniocentesis should be avoided and the cord should be clamped as early as possible. The longer a baby is protected in labour from direct contact with the mother's blood and secretions the better. Artificial rupture of the membranes and episiotomies should be done at the last moment or better still avoided. Fetal scalp electrodes and blood collection from the baby's head are contraindicated until the technique has been adapted to make it safe. If the membranes have ruptured, exposure time to maternal secretions could be shortened by use of oxytocin. Instrumental deliveries should be done carefully and preferably with rubber cup vacuum extractors to prevent abrasions of the fetal head\textsuperscript{12}. Washing of the vagina with chlorhexidine before an instrumental delivery or during any labour with ruptured membranes should be studied. Babies should be rinsed immediately after delivery. Extra caution is required for caesarean sections. The scalpel should not be used for the full thickness; instead the last part should be opened bluntly with the tip of the finger in order not to nick the baby. The operative technique should be modified to ensure that the baby has very little contact with the mother's blood. To decrease the vertical transmission rate by doing caesarean sections on all known HIV-positive women is not feasible, and use of zidovudine to prevent vertical infection antepartum and during labour is too expensive. Careful wiping of the baby's face instead of suction should be enough in most situations. The cord clamp should not crush the cord in the presence of maternal blood.

Some treatment protocols will have to be changed. It seems prudent to continue long-acting penicillin injections in a pregnant woman with any evidence of syphilis from the time of diagnosis until delivery, to prevent congenital syphilis, if she is not proven HIV negative. This approach is necessary because definitive treatment of syphilis is difficult in HIV infected individuals\textsuperscript{13} and because there is a strong correlation between the two infections. A study from Malawi\textsuperscript{14} showed that 71.7\% of male patients with positive syphilis serology were HIV positive. Babies of mothers with syphilis, who have been treated routinely during pregnancy, will still need a course of penicillin after birth. Cervical cerclage seems contra indicated if patient and partner are not known to be HIV negative.
Family Planning

If one partner is potentially HIV positive, use of condoms is sensible. To prevent induced abortions, especially because they are mostly illegal and therefore dangerous, the “double Dutch” method (condom plus hormonal contraception) is advocated. Few women have the power to make their partners use condoms. If a pregnancy is contemplated the logical thing would be for both partners to have themselves tested for HIV first. Such a strategy looks good on paper but only the rich are able to organise testing for themselves.

Availability of good reliable contraceptives and the relevant education is important in countries where there will be many orphans. There is considerable confusion about the effect of different contraceptives on the infectiousness of and susceptibility to the HIV. Condoms female as well as male are protective. Use of an intrauterine contraceptive device (IUCD) is irrational if HIV infection has not been excluded in both partners. Severe peritonitis in association with an IUCD is seen more often in patients with HIV infection. Other foreign bodies such as those used for osteosynthesis also become frequently infected. The situation in relation to hormonal contraception is unclear. Factors such as less bleeding (the combined pill and depot medroxyprogesterone acetate (DMPA), more frequent bleeding (progestagen-only pill and DMPA), more ectropion (combined pill), less ectropion (DMPA, Norplant, progestagen-only pill), prevention of other sexually transmitted diseases, and less motivation to use a barrier method if a hormonal method is already being used are important in varying degrees. There is no evidence for an HIV-related increase in infection of the injection or implantation side of DMPA and Norplant.

Patients known to be HIV positive who want to use contraception need a reliable method. Studies and personal surveys indicate that in Zimbabwe, often mentioned as an example to other African countries in relation to family planning, nearly half the pregnancies are unwanted and or mistakes, and 20-40% of pregnancies are conceived while combined oral contraceptives or progestagen-only pills are being used or have just been stopped (because of side-effects or unavailability). Drugs that affect the reliability of oral contraceptives are commonly used in HIV-positive patients, who often have diarrhoea too. Under these circumstances, sterilisation is probably the method of choice in patients with children. To recommend sterilisation for a man or woman without living children seems very cruel, especially when we do not know for certain that a cure for AIDS will not be available before she or he dies or if even whether the disease might be self-limiting. Injections, or better still implants (because there is no need to worry about contraceptives being out of stock for the next five years) seem the best choice. Unfortunately donors like USAID do not facilitate the procurement of Norplant because of the costs,
and political developments in the USA promise no improvement. By far the majority of patients are too poor to pay US$12 for Norplant.

Studies on non-barrier contraceptives and HIV show that their potential effect on horizontal transmission is of a far smaller magnitude than that of vertical transmission prevented, if a reliable contraceptive is used. Therefore hormonal contraceptives should lose their market domination for at-risk groups for HIV infection and pill failure. As it happens, these groups are often identical.

What about abortion? In Zimbabwe there is a heated discussion about the legality of pregnancy termination in known HIV-positive women. Most of those who request help - about a hundred a year - have already lost one child and sometimes two to AIDS. Adoption, which is difficult because of cultural beliefs, becomes even more difficult if the parents died of AIDS. The estimate is that five years from now there will be 9 million AIDS orphans in sub-Saharan Africa\textsuperscript{20}. Doctors and nurses involved in the terminal care of HIV-positive babies are often blamed for not having tried to prevent subsequent pregnancies in the mothers. But imagine how hard it is to offer contraceptives to a mother who is losing her child from a vertical infection. Nevertheless, the last illness of her child will probably be the last contact this woman will have for a long time with a health worker who knows about her HIV status.

Adolescents have an impossible task to find condoms in the rural areas where 80-90\% of them live. Community-based distributors mainly responsible for contraceptive pills and condoms in the areas do not cater for unmarried individuals. A rural or small town boy, let alone girl, could rarely obtain a condom without the whole community talking about it. This problem needs urgent attention since up to 30\%\textsuperscript{21} of 15-19-year-old pregnant girls are HIV positive. Possible strategies include provision of condom-dispensing machines in bars, and perhaps in schools and mission and health facilities, and making the selling of condoms at cost price a condition for obtaining a liquor or petrol licence. Community leaders should also ensure that sex can be discussed openly, and exert their influence by example and education.

Doctors have their own problems and private risks like everybody else and they lose colleagues and acquire extra family responsibilities. Professionally it is difficult to keep up morale when there are tragedies all around and to see the improvements in health indicators of a few years ago wiped out. Needle accidents are more than a 100 times riskier than in most of the first world where they are already cause for serious discussion. Tinkering with your car or even playing sports becomes dangerous since a resulting abrasion might be splashed by blood during next breech delivery or soaked via a small puncture in a (re-sterilised) glove.
Detecting a fungal infection between your toes, an infected mosquito bite, or an aphthous ulcer in your mouth brings on a cold sweat and - empathy with patients who do not want to be tested.

REFERENCES
21 Bulawayo Health Services Department. Results of two HIV sentinel surveys carried out in Bulawayo City 1991 & 1993. Zimbabwe, Bulawayo Health Services Department.
I was afraid, and not sure of the results. I blamed myself, after the 4th operation, I thought about it late.