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Breastfeeding and HIV transmission

Treatment for women with advanced HIV infection likely to reduce risk of transmission

By Jennifer Georgeson and Keith Alcorn

Up to half of infants infected with HIV in nine major studies of mother to child HIV transmission contracted the virus through breastfeeding, and the risk of infection did not fall throughout the breastfeeding period, according to a meta-analysis published in the June 15th edition of the *Journal of Infectious Diseases*.

In an accompanying editorial experts from the US Centers for Disease Control emphasise that antiretroviral treatment should be targeted at breastfeeding mothers with advanced HIV infection as a key element in the package of measures designed to reduce mother to child HIV transmission.

Male infants and children of mothers with low CD4 cell counts (< 200 cell/mm³) were at greater risk of infection through breastfeeding, suggesting that substantial efforts will be needed to identify mothers with advanced HIV disease who would benefit from antiretroviral treatment. The reasons for the greater vulnerability of male children is still unclear.

The cumulative probability of late postnatal transmission (more than 28 days after birth) through breastfeeding at 18 months was 9.3% in a study of 4085 HIV-1 exposed, breastfed infants from nine clinical trials conducted in high prevalence resource-poor settings. Of the 24% of children infected with HIV, 42% had late postnatal transmission, with the overall risk of late postnatal transmission at 8.9 transmissions/100 child years of breastfeeding.

Making breastfeeding safer

Breastfeeding protects against malnutrition and infant morbidity and mortality in both the developed and developing world. This is particularly true in areas where the water supply is unsafe and infant mortality remains high.

The cost of supplying the extra nutrients needed by a breastfeeding woman - around 500 calories a day - is far less expensive than using animal milk or formula to feed the child. It also helps to delay the return to fertility, thereby helping with child spacing. Breastfeeding is therefore good for the health of both mother and child. However, breastfeeding also carries the risk of transmission of HIV.

Mother-to-child transmission (MTCT) of HIV-1 can occur in the womb, during delivery and postnatally through breastfeeding. In many parts of the world complete avoidance of breastfeeding is not feasible, so an international collaboration set out to identify the factors that might increase the risk of transmission during breastfeeding, and also to determine whether the risk of transmission is higher during the early months of breastfeeding or not.

In this study the authors conducted an individual patient data meta-analysis of transmission of HIV-1 through breastfeeding to estimate the contribution of later postnatal transmission of HIV-1 to the overall risk of MTCT and to characterise the timing and determinants of late postnatal transmission.

Data from nine clinical trials of short course antiretroviral therapy for prevention of mother to child transmission were pooled in the

hope that greater statistical power would shed more light on the some of the contradictory findings of previous studies.

The meta analysis

Detailed analyses of late postnatal transmission included breastfed children with negative HIV-1 viral load tests at 4 weeks of age, some of whom eventually acquired HIV-1 infection through late postnatal transmission.

Of the 4085 children enrolled in this study, 993 (24%) were definitely infected, with similar proportions in the placebo group or the short course antiretroviral therapy group. Early acquisition of infection occurred in 314 children (32%), with 122 being positive from birth (12%). 225 (23%) had late postnatal transmission.

The timing of transmission was unknown for 454 children (46%), as 343 were without a prior negative HIV-1 viral load test result whilst 111 had a negative HIV-1 test result before 28 days of age. The authors then assumed that the timing among these 454 children was similar to that for children with known timing of infection.

They therefore concluded that 58% of the HIV-1 infected children acquired infection early and 42% acquired infection through late postnatal transmission. Late postnatal transmission was defined as seroconversion after day 28 in those children with a negative HIV-1 result at 4 weeks of age who were breastfed to at least 28 days of age. Therefore 223 of the HIV-1 infected children had late postnatal transmission, and 2082 remained uninfected.

A number of factors that could affect the risk of late postnatal transmission through breastfeeding were analysed including maternal age, parity and CD4 count and infant birth weight and sex. Other potential risk factors such as maternal breast abnormalities, children's oral candidiasis and type of breastfeeding (exclusive vs. mixed feeding) could not be examined as they were not collected systematically in all participating trials.

Increased risk for male infants still unexplained

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children's oral candidiasis and type of breastfeeding (exclusive vs. mixed feeding) could not be examined as they were not collected systematically in all participating trials.

True risk may be underestimated

The authors point out that the risk of MTCT through breastfeeding estimated in this analysis may be an underestimation of the true risk, with the duration of breastfeeding in the mostly urban-based clinical trial populations being generally shorter than most areas of sub-Saharan Africa. However, the results of the meta-analysis are consistent with those of the randomised clinical trial of breastfeeding vs. formula feeding conducted in Kenya, in which 44% of MTCT in breastfeeding arm was attributable to breastfeeding (both early and late postnatal transmission).

The findings strongly support strategies being pursued by programmes such as MTCT-Plus which seek to provide short course antiretroviral treatment around the time of delivery and also treatment for mothers with advanced HIV disease, both to reduce the risk of mother to child transmission and to improve the chances that the baby will be raised by its birth mother.

References

The Breastfeeding and HIV International Transmission Study Group. The late postnatal transmission of HIV-1 in breast-fed children: An individual patient data meta-analysis. *JID* 189: 2154-2166, 2004.

Bulters M et al. Prevention of mother-to-child transmission of HIV-1 through breast-feeding: Past, present and future. *JID* 189: 2149-2153, 2004.

New report on palliative care and HIV: recommendations and resources

Introduction

By Dr Richard Harding, Research Fellow, Department of Palliative Care and Policy, Guy's, King's and St Thomas' Medical School, King's College, London

Palliative care is increasingly recognised as a required component for quality HIV clinical management (1). In both industrialised and developing countries, palliative care is needed firstly for impeccable pain and symptom management and support throughout the disease trajectory.

Secondly, in the light of anticipated increasing antiretroviral provision, palliative care is required to manage toxicities and side effects and promote adherence to antiretroviral therapy.

Thirdly, it is necessary to provide end-of-life care for those whose treatment is inaccessible or for whom it fails, and for those who continue to develop terminal diagnoses such as malignancies and end stage liver disease. A recent systematic review of palliative care on HIV patient outcomes found significant improvements in pain & symptom control, anxiety, insight, and spiritual wellbeing (2).

Although palliative care should be integrated in clinical care from the point of diagnosis, the lack of diagnostic and curative facilities as well as late disease presentation in resource-poor settings dictate the need for palliative care to be a large component of care from the point of first contact.

The international health development community has identified the need for palliative care as a component of public health services (3). The majority of effort is focused on Sub-Saharan African, where extrapolation from UNAIDS figures and clinical pain prevalence data suggest that in 2003 1.84 million people died from AIDS in pain.

In response to the growing funding, policy and practice focus on palliative care, particularly in Sub-Saharan Africa, the Diana Princess of Wales Memorial Fund commissioned an appraisal of current activity and potential for expansion through its Palliative Care Initiative. The review aimed to highlight examples of good practice and isolate factors associated with success, thereby informing and guiding the development of quality palliative care.

A series of recommendations have been proposed in the light of the review, and these recommendations focus on a set of key areas:

1. Advocacy
2. Integration and coverage
3. Education and training
4. Drug Access
5. Data systems

Advocacy

As palliative care is often a novel discipline in Africa, accompanied with much fear around morphine use, advocacy activity by NGOs and providers has been crucial to success. Particular areas of activity necessary to enable provision of palliative care have been to address restrictive legislation with respect to opioids legislation and inclusion of palliative care in health care policy.

Key activities in achieving this have been the dissemination of demonstration projects to show palliative care services developed and delivered by indigenous health care workers, and lack of problems (addiction, misuse) of morphine, have been successful in encouraging palliative care projects across the region. Advocacy requires excellent networking and common goal setting, as well as adequate resourcing, to ensure a critical mass of credible advocates

Integration and coverage

HIV home-based care without palliative care in sub-Saharan Africa has been termed "home-based neglect", and it is essential that existing HIV care providers graft palliative care onto their existing services.

Multisectoral collaborative responses are needed to meet the total care needs of families and communities supporting provision of palliative care. A single provider is unlikely to hold adequate skills or funding.

Simple, protocol-led palliative care provided by all can greatly improve the quality of care and reduce suffering e.g. TASO. A current challenge is to reduce the isolation of palliative care "centres of excellence" to ensure greater sustainable coverage and effective referral systems.

However, not all HIV care services may need to be providers of palliative care in areas where specialist providers are active. For example in Kampala the Mbuya Reach Out care project has had its nurses trained in recognising palliative care needs by the local Hospice Africa Uganda, who take referrals and co-manage patients through the provision of pain and symptom control.

Education and training

The education and training of providers at all levels (lay/community, traditional healers, nurses and doctors) is essential to ensure maximum coverage and standards of clinical skills.

However, a lesson from the field is that continuous support and education is required to enable clinicians to practice palliative care skills, as many return to settings where they are the only clinician with an understanding in pain and symptom assessment and management. Adequate resources and support systems are necessary to ensure palliative care skills are sustained.

The provision of simple protocols for multi-level provision in the continuum of HIV care have greatly improved access to palliative care, such as the Hospice Africa Uganda "Blue Book", the Gambian Hands on Care manual, and the WHO "Integrated Management of Adult Adolescent Illness" manual.

The Hands on Care Manual describes the core element of palliation in the continuum of care: "REMEMBER: There is never nothing we can do! We can always give: pain relief and symptom relief, good nursing care, emotional support and spiritual support."

Drug access

Drug access is crucial to high quality and effective pain and symptom management. The experience of demonstration palliative care services to date have been instrumental in promoting safe cheap use: no issues of diversion, abuse or addiction have been documented.

However, services operate in a context of chronic drug shortages and reluctance to prescribe strong opioids according to the WHO pain ladder guidance. Systemic challenges in the supply chain from ordering to administering are compounded by the lack of pharmacists in public health services, and so evaluation and attention to supply issues are crucial.

Data systems

The current paradox presented by palliative care initiatives in Sub-Saharan Africa is that there is a wealth of experience in the field, but a dearth of evidence. The nexus of challenges consists of clinical, logistical, financial, social, political, and research agendas, and it is crucial that clinical and health service audit and research are undertaken to identify how best to deliver palliative care in the resource-poor setting, and to establish an information base relevant to the developing world (Merriman).

Other health care delivery programmes such as TB care have improved significantly through evaluative investment such as operational research and the use of service development frameworks.

Community based health care has been the most common model of care in Africa, and this is also true of palliative care services which have been innovative thereby delivering palliative care through existing home based care, through rural roadside clinics and through consultancy to existing main stream secondary care.

However, if community models of palliative care are to be transferable and sustainable they require scrutiny to establish answers to questions such as the community capacity to care, limitations in quality care provision, the level of clinical supervision required, and how best to recruit and retain community volunteers.

Outcome measures relevant and meaningful to the African context need to be developed, as do optimum methods of data collection and robust feasible study designs.

The way forward

There is an overwhelming and increasing need for palliative care in Sub-Saharan Africa, but currently low coverage. However, innovative programmes have demonstrated safe, cheap morphine use and apparently high standards for pain and symptom relief.

To extend this crucial relief of suffering to all those who need it, advocacy for palliative care by funders, policy makers, and health

care providers is crucial. The demonstration of success by existing hospices and palliative care teams has been central to supporting advocacy activities to promote and sustain palliative care.

In order to ensure that gains to date are sustained and expanded, funding for service development activities and technical expertise in monitoring, audit and evaluation is critical.

Clinical configurations that provide pain & symptom management and support throughout the HIV disease trajectory, particularly through the use of simple protocol-led palliative care manuals and grafting palliation on to existing home-based HIV care services, have led the way in comparison to developed countries where palliative care has largely been forgotten in the era of antiretroviral therapy.

The full report "Palliative Care in Sub-Saharan Africa: an appraisal" by Dr Richard Harding and Professor Irene J Higginson can be accessed at:

http://www.theworkcontinues.org/pressroom/6_3_publications.htm

References

- (1) Editorial. The untapped potential of palliative care for AIDS. *Lancet* 2003; 362(9398):1773.
- (2) Harding R, Easterbrook P, Karus D, Raveis VH, Higginson IJ, Marconi K. Does palliative care improve outcomes for patients with HIV/AIDS? A systematic review of the evidence. *Sexually Transmitted Infections*. In press.
- (3) Sepulveda C, Habiyambere V, Amandua J, Borok M, Kikule E, Mudanga B et al. Quality care at the end of life in Africa. *British Medical Journal* 2003; 327:209-213.

Further Resources

Advocacy

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African palliative care manuals

The Hospice Africa Uganda "Blue Book" is available from educ@hospiceafrica.or.ug, and may be supplied in limited numbers or downloaded from the Diana Princess of Wales Memorial Fund website (above).

The Gambian "Hands on Care " manual may be available from gschneider@gamtel.gm

The WHO IMAAI manual is available from [the WHO website](#)

about HATiP

A regular electronic newsletter for health care workers and community-based organisations on HIV treatment in resource-limited settings.

The newsletter is edited by Theo Smart (Cape Town) and Keith Alcorn, NAM's Senior Editor (London).

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