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 Session: *Pediatric and Adolescent HIV*
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 Time: 10:15–12:15
 Room: Room 2.60

Infections in HIV-exposed uninfected infants: Under-appreciated but a growing concern

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With improving measures to prevent vertical transmission of HIV and an expanding population of young adults acquiring HIV, the population of HIV-exposed uninfected (HEU) infants is increasing. This group is at higher risk for infectious morbidity than the general population. Obvious reasons include a higher prevalence of infectious diseases such as tuberculosis in the household and illness in the parents affecting care & family integrity. HIV exposure, itself might affect the immune system and formula feeding can exacerbate gastro-intestinal infections. Antiretroviral exposure in utero is occasionally associated with neurodevelopmental delay.

Emerging data on infections in HEU children will be presented. We will also discuss our own increasing awareness of this problem. The spectrum of disease can be similar to that seen in HIV-infected children and includes *Pneumocystis pneumonia* and cytomegalovirus-associated colitis.^{1–4}

References

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Second- and third-line treatment for pediatric patients failing ART

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Recommending potent and effective second-line regimens for infants and children is especially difficult because of the current lack of experience in resource-limited settings and the limited formulations available. This highlights the importance of choosing potent and effective first-line regimens and ensuring their durability and effectiveness by optimizing adherence.

The 2010 WHO guidelines recommended a regimen based on a PI boosted with RTV and combined with two NRTIs as the second-line treatment for children who fail a regimen of two NRTIs plus an NNRTI. For infants and young children exposed to an NNRTI as part of PMTCT interventions and starting a PI-based regimen in first-line ART, the recommendation for second-line was to use two new NRTIs and an NNRTI, as this was the only new drug class available.

The 2013 WHO guidelines recommend as first line therapy a PI containing regimen. Therefore after failure of first line children should switch to an NNRTI based regimen including EFV if older than 3 years of age.

New drugs including integrase and fixed dose combination have been introduced in the market in the developed worlds and experience on their use is growing in developing countries settings. Validation studies to assess these new combinations are critical to ensure future effective alternatives. Innovative second-line strategies such as PI+integrase or induction and maintenance using PI/r monotherapy among children should also be investigated.

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The emerging challenge of managing HIV-infected adolescents

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Worldwide, more than three million children are infected with human immunodeficiency virus (HIV), approximately 90% of whom live in sub-Saharan Africa. There has been a remarkable expansion in access to paediatric ART globally since 2004, resulting in substantial decline in mortality rates in HIV-infected children. As the HIV epidemic matures, interventions to prevent mother-to-child HIV transmission (PMTCT) and antiretroviral therapy (ART) is scaled up, the burden of paediatric HIV infection is shifting to adolescents. The growing population of perinatally HIV-infected adolescents within this region presents not only unprecedented challenges, but also opportunities to learn about managing chronic disease. Adolescents who have grown up with HIV present significant challenges to HIV care programmes. Some of the unique features that characterise HIV infection in adolescence are considered. Long-standing HIV infection acquired when the immune system is not developed results in distinctive chronic clinical complications that cause severe morbidity. There is limited understanding of the pathogenesis of these conditions. As well as dealing with chronic illness, HIV-infected adolescents have to confront psychosocial issues, maintain adherence to drugs, and learn to negotiate sexual relationships, while undergoing rapid physical and psychological development. Context-specific strategies for earlier identification and prompt linkage to care of HIV-infected adolescents need to be developed. Clinical HIV care should integrate age-appropriate sexual and reproductive health, psychological, educational and social services. Healthcare workers will need to be trained to recognise and manage the needs of this age-group so that the increasing numbers of children surviving to adolescence can access