HIV: Current Research

Extended Abstract

Acute and Early HIV Infection: A Missed Opportunity for Behavioral and Biomedical Combination Strategies for HIV Prevention in Sub-Saharan Africa

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Abstract

Acute HIV Infection impacts on both patient management and public health interventions targeting HIV/AIDS epidemic. The ongoigng unchanged HIV incidence in the era of treatment as a prevention intervention may be attributable in part, to current programs failing to diagnose and treat AHI. This review maps the current knowledge of AHI in SSA where 5% to 38% of new HIV infections originate from individuals being in the acute stage of the infection. The amount of infection attributable to AHI depends on the individual risk-level behavior. The unavailability of POC appropriate diagnostic tool in SSA results in many cases of AHI being missed by HIV prevention, care and treatment programs. Clinicians should be aware of common signs and symptoms and how to screen for AHI especially in high-risk group population. Patients screening positive for AHI should have their risk-level behavior assessed followed by risk behavior reduction interventions with appropriate follow-ups in order to diagnose HIV at the earlier stage, and ensure linkage into care, which results in immune preservation, prevention of morbidity and mortality in addition to the prevention of further transmission of HIV infection to other sexual partners. Early achievements in biomedical approaches for HIV prevention included physical barriers (condoms), clean injection equipment (both for medical use and for injection drug users), blood and blood product safety, and prevention of mother to child transmission. In recent years, antiretroviral drugs to reduce risk of transmission (when the infected person takes the medicines; treatment as prevention or TasP) or reduce risk of acquisition (when the seronegative person takes them; pre-exposure prophylaxis or PrEP) have proven efficacious. Circumcision of men has also been a major tool relevant for higher prevalence regions such as sub-Saharan Africa. Well-established prevention strategies in the control of sexually transmitted diseases and tuberculosis are highly relevant for HIV (i.e., screening, linkage to care, early treatment, and contact tracing). Unfortunately, only slow progress is being made in some available HIV prevention strategies such as family planning for HIV-infected women who do not want more children and prevention mother-to-child HIV transmission. Current studies seek to integrate strategies into approaches that combine biomedical, behavioral, and structural methods to achieve prevention synergies. This review identifies the major biomedical approaches demonstrated to be efficacious that are now available. We also highlight the need for behavioral risk reduction and adherence as essential components of any biomedical approach.

The history of disease control and prevention is replete with examples of effective tools that are available for use, but are underutilized in the field or the clinic. HIV/AIDS prevention is a prominent case in point, a challenge that the National HIV/AIDS Strategy for HIV in the US seeks to address3. Both journalists and scientists have highlighted the disappointing missed opportunities in the HIV epidemic4-13. Combination prevention approaches are now available that combine multiple efficacious strategies to block transmission, but all must include behavioral components to avoid risk compensation--the increased risk taking behavior that may accompany prevention approaches that clients perceive to be more effective than they really are14. All three early approaches (condoms, clean needles/syringes, and PMTCT) also required structural reform and technical capacity-building to enable widespread dissemination of the interventions. Widespread condom and needle distribution confronted political opposition that inhibited program scale-up in many venues. Even blood safety measures were resisted in the pre-HIV screening era by many blood banking authorities for economic reasons.

Purpose of-Care analytic test for AHI

The above-given confirmations have edified the need for diagnosing AHI at the POC in SSA. Consequently a couple of examinations have endeavored fruitlessly to exhibit practically speaking the hypothetical chance of the fast fourth-age test which may distinguish the HIV-explicit antigen notwithstanding HIV-explicit antibodies. for instance , the affectability and explicitness of the p24 antigen segment of the test were insufficient for across the board use to research AHI in Malawi [39]. Comparative outcomes were found in Zambia whereby under 2% of the cases antigen positive HIV diseases were identified by the fast fourth-age test [40]. Also, a national relatives study directed in Swaziland reasoned that the fast fourth-age test neglected to differentiate any evident AHI,

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rather all the Agrecognized by the test were erroneously positive for AHI [41].