

ORAL PRESENTATION

Open Access

Renal manifestations and associated factors among HIV infected children at Muhimbili National Hospital, Dar es Salaam, Tanzania

Francis Fredrick^{1*}, Paschal Ruggajo², Eden E Maro², Bjarne Magnus Iversen³, Gopel Basu⁴

From First International Science Symposium on HIV and Infectious Diseases (HIV SCIENCE 2012) Chennai, India. 20-22 January 2012

Background

Human Immunodeficiency Virus infection is a global challenge and sub-Saharan African countries contribute significantly to this pandemic. Children are vulnerable and acquire the infection mostly from their mothers. Highly Active Anti-retroviral Therapy have led to dramatic changes in the incidence of opportunistic infections with reduction in morbidity and mortality, which has paved way for manifestation of non-infectious complications including renal complications. The aim of this study was to determine prevalence of microalbuminuria, proteinuria and associated factors among Tanzanian children.

Methods

We recruited 240 HIV infected children attending care and treatment clinic. Microalbuminuria and proteinuria were determined by using dipstick and Microalbumin 2-1 combo test strips on spot urine respectively. Serum Creatinine, white blood cell and CD4 counts were determined. Renal ultrasound examinations were also performed.

Results

Forty nine children (20.4%) had microalbuminuria and 17 (7.1%) had proteinuria. Prevalence of proteinuria was significantly higher among children aged 120 months and above (p -value <0.05). Lower CD4 percent ($< 25\%$) was a risk factor for microalbuminuria (p -value <0.01) and proteinuria (p -value <0.01). Mean CD4 count was significantly lower in children with microalbuminuria (p -value <0.05) and proteinuria (p -value <0.001). Twenty

eight (11.7%) children out of 153 had increased cortical echogenicity on ultrasound examination.

Conclusion

Proteinuria and increased cortical echogenicity were prevalent among HIV infected children who may indicate early onset of renal complications and this call for routine screening for early detection.

Author details

¹Department of Pediatrics and Child Health, School of Medicine, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania. ²Department of Internal Medicine, School of Medicine, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania. ³Section of Nephrology, Haukeland University Hospital, Bergen, Norway. ⁴Department of Nephrology, Christian Medical College Vellore, Tamil Nadu, India.

Published: 4 May 2012

doi:10.1186/1471-2334-12-S1-O11

Cite this article as: Fredrick et al.: Renal manifestations and associated factors among HIV infected children at Muhimbili National Hospital, Dar es Salaam, Tanzania. *BMC Infectious Diseases* 2012 **12**(Suppl 1):O11.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



* Correspondence: fredrick.francis78@gmail.com

¹Department of Pediatrics and Child Health, School of Medicine, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania
Full list of author information is available at the end of the article