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New insights into the bugs in the airway of HIV-infected children with lung disease

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Pulmonary diseases and syndromes occur in human immunodeficiency virus (HIV)-infected children and they often differ from children not co-infected by the HI virus. *Pneumocystis jiroveci* pneumonia (PCP) is a common opportunistic LRTI in HIV-infected infants, early in life and presents as acute severe pneumonia. The presence of PCP is known to be commonly associated with *Cytomegalovirus* co-infection and CMV is often responsible for mortality. Bacterial and viral co-infection occurs but does not impact outcome. The cytokine results suggest that the major cytokine associated with severe hypoxic pneumonia in very young, HIV-infected, infants is IP-10. There is now clear evidence that bronchiolitis is not a common condition in HIV-infected infants. New evidence is emerging that Human Rhinovirus is associated with both bronchiolitis and pneumonia in both HIV-infected and non-infected children. With regard to the sputum cytokines identified in children with an acute lower respiratory tract infection, IL-13, IL-4, IL-5, TNF-α, IFN-α, IFN-γ and MIP-1α are significantly lower in HIV-infected cases, whilst IP-10 and MIG are significantly higher in HIV-infected cases. Chronic lung disease, especially bronchiectasis, is often sequelae in HIV-infected children. *H. influenzae* and *-parainfluenzae* are the predominant organisms cultured in children with HIV-related bronchiectasis and now shown to be the dominant microbiome in such individuals. Il-8 is the cytokine which dominates in children with HIV-associated bronchiectasis.

Biography

Green R J is Director of Pediatric Services and Pediatric Pulmonology, Paediatric Intensive Care and Allergy Services at the Steve Biko Academic Hospital, Pretoria. He is a Full Professor in the Department of Pediatrics and Child Health within the School of Medicine at the University of Pretoria. He holds a PhD and DSc and is a fellow of the Royal College of Physicians and Past President of the College of Pediatricians of South Africa. He is also Immediate Past Chairman of the Allergy Society of South Africa. The National Research Foundation rates him as an established researcher, in pediatric pulmonology.

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