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Session: Infection Control, Nosocomial Infections and Critical Care

Date: Saturday, April 5, 2014

Time: 12:45-14:15

Room: Ballroom

Nutritional responses in management of persistent diarrhea in children with severe acute malnutrition and HIV: Lessons from Mildmay Uganda (MUG)G. Kirungi^{1,*}, Y. Karamagi², I. Kasirye³, M. Odiit⁴, E. Kawuma⁴, J. Naluwoza⁵, B.N.M. Mukasa⁶¹ Mildmay Uganda HIV and AIDS care, training and research, Kampala, Uganda² Mildmay Uganda HIV and AIDS care, Training and Research, Kampala, Uganda³ Mildmay Uganda HIV and AIDS care, training and Research Centre, Kampala, Uganda⁴ Mildmay Uganda, Kampala, Uganda⁵ Mildmay Uganda HIV and AIDS care, training and Research Centre, Kampala, Uganda⁶ Mildmay Uganda HIV and AIDS care, training and Research centre, Kampala, Uganda

Background: One third of all child deaths globally are associated with malnutrition and 11% child deaths are due to diarrheal diseases. Children with HIV and malnutrition are therefore more vulnerable to severe diseases and death. MUG, operates a 33-bed in-patient unit for children with advanced AIDS. In 2010, 182 out of 628 (29%) children admitted to the unit had severe acute malnutrition (SAM) and 24/52 (46%) of the deaths were due to SAM and diarrheal related complications; dehydration and electrolyte imbalances. Eighteen child deaths were due to persistent diarrhea and SAM and 80% deaths occurred within 5 days of admission.

Methods & Materials: A death audit conducted in 2011 revealed that children who died due to SAM and diarrheal diseases presented with average MUAC <111 mm, below -3 standard deviation weight for height, severely wasted, history of loose stool and vomiting for an average of 15 days and were dehydrated. Initially, children were managed with therapeutic feeds F75, zinc and rehydration solution for the malnourished, however, diarrhea episodes never reduced or stopped. A new strategy was then adopted, this involved totally excluding milk from the diet, providing rice porridge and yoghurt until diarrhea stopped, then start F75, F100 and rehabilitate accordingly. Children who were immediately started on rice porridge and yoghurt stopped passing loose stool within two days and had 95% survival rate than those started on F75 (50%).

Results: The death audit helped us design and adopt a new cheap and simple strategy to manage persistent diarrhea among severely malnourished children. Close monitoring of feeds, vitals and RBS, accurate assessment and diagnosis of SAM, dehydration and other complications helped reduce mortality with correct management. A diet high in calorie, low lactose base, low fat greatly contributed to appropriate management of persistent diarrhea.

Conclusion: Integration of nutrition responses in health care greatly contributes to improved quality of life, and management of HIV-related illnesses in resource limited settings.

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Detection of *Treponema pallidum* by seminested PCR in the cerebrospinal fluid of asymptomatic HIV-infected patients with latent syphilisD. Fraga¹, L. Goldani^{2,*}¹ Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil² Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil

Background: Neurosyphilis diagnosis is frequently dependent upon the results of serological tests and cerebrospinal fluid abnormalities, but the reliability of findings in patients with HIV-1 infection has been questioned, especially in asymptomatic patients with latent syphilis

Methods & Materials: In this study, we present the data on the presence of *T. pallidum* DNA in CSF from asymptomatic HIV-infected patients with the diagnosis of syphilis. CSF and serum samples were collected from 12 HIV-infected patients attending a tertiary care located in southern Brazil, during the period 2012 to 2013

Results: In CSF samples from five of 12 patients (40%), we detected *T. pallidum* DNA. Unexpectedly, in these patients, CSF cell count, protein and glucose levels were normal. In addition, none of these 5 CSF samples presented a positive VDRL reaction. Serum VDRL titers were similar between patients with positive and negative CSF *T. pallidum* DNA. Most patients with detectable *T. pallidum* DNA presented low serum VDRL titers. A higher serum VDRL titer of 1:64 was observed in only one patient.

Conclusion: Our results have shown that asymptomatic HIV-infected patients with evidence of latent syphilis and normal CSF might present detectable *T. pallidum* DNA in the CSF. The detection of *T. pallidum* DNA by our seminested PCR provides additional information beyond conventional CSF analysis for diagnosis of neurosyphilis. The detection of *T. pallidum* DNA in the CSF despite normal CSF findings in HIV-infected patients could also provide a different therapeutic approach including the use of intravenous aqueous crystalline penicillin.

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