Monday 8 August 2011
Parallel session 2
2.1 INFECTION AND CANCER

Chair: Dr. Newton Kumwenda, Africa

02-1.1 MULTIDRUG RESISTANT TUBERCULOUS MENINGITIS IN THE UNITED STATES, 1993–2005

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Background Little is known about the epidemiology of multidrug resistant tuberculous meningitis (TBM), defined as resistance to at least isoniazid and rifampin. We sought to describe cases of multidrug resistant TBM reported in the United States with respect to clinical characteristics and treatment outcomes.
Methods We conducted a retrospective cohort study using data collected by the National Tuberculosis Surveillance System at the Centers for Disease Control and Prevention in the United States. We included patients diagnosed with TBM between 1 January 1993 and 31 December 2005, with a positive culture from cerebrospinal fluid and drug susceptibility testing performed. We compared clinical and demographic characteristics of TBM patients with and without multidrug resistance, as well as the proportion of patients in each group that died while still receiving anti-tuberculosis therapy.
Results 26 of 1683 patients (1.5%) with cerebrospinal fluid culture-positive TBM were found to have multidrug resistance on initial susceptibility testing. Anti-tuberculosis therapy was stopped due to death in 19 of 26 patients (73%), after a median of 42 days of treatment (IQR 15–225). Of the 19 patients with known HIV status, 17 were HIV-positive (89%).
Discussion Most cases of multidrug resistant TBM in the United States occurred in HIV-infected patients, and the associated mortality was high. Due to the time period required to obtain drug susceptibility results based on conventional methods, rapid molecular diagnosis of drug resistance is of great potential benefit in this setting and needs to be evaluated further.

02-1.2 IMPACT OF MALNUTRITION IN SURVIVAL OF HIV INFECTED CHILDREN AFTER INITIATION OF ANTIRETROVIRAL TREATMENT (ART)

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Background Malnutrition is a common condition in HIV-infected children; however, its impact in survival of HIV infected children after initiation of antiretroviral therapy is not well understood.
Objective To assess the impact of malnutrition in survival of HIV infected children after initiation of antiretroviral treatment (ART).
Methods A retrospective cohort study was conducted in HIV infected children starting ART at Zewditu memorial hospital, Addis Ababa, Ethiopia. Demographic, nutritional, clinical and immunological data were carefully extracted from the existing ART logbook. Data were analysed for uinvariate and multivariate analysis using Cox regression proportional hazard model. Survival rate was calculated and compare with the Kaplan–Meier and log rank tests.
Results A total of 475 HIV infected children starting ART from 21 March 2005 to 30 April 2008 were included in the study. Of whom 42 (8.8%) died during a median study follow-up of 12 months. The average survival time for the entire cohort was 27.9 months. Independent baseline predictors of mortality were severe wasting (HR 4.99, 95% CI 2.4 to 10.2, p<0.00), absolute CD4 below the threshold for severe immunodeficiency (HR 3.02, 95% CI 1.02 to 8.96, p =0.04) and low haemoglobin value (HR 2.92, 95% CI 1.3 to 6.7, p=0.001 for those haemoglobin value <7.0 gm/dl).
Conclusion Despite the apparent benefit of ART use on HIV related survival, severe wasting (WHZ<−3) appear to be strong independent predictor of survival in HIV infected children receiving ART.

02-1.3 EVALUATION OF HIV TREATMENT OUTCOMES IN SOUTHWESTERN NIGERIA

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Introduction The recently published 2010 United Nations (UNGASS) report shows that 70% of adults and children with HIV are alive 12 months after initiation of antiretroviral therapy in Nigeria. This study evaluated survival of patients on therapy towards understanding treatment outcomes.
Methods A retrospective chart review of 446 adult patients who have been on treatment from January 2007 to December 2009 in Lagos and who started triple therapy were included. Information such as CD4 count, opportunistic infections (OI), clinical staging and laboratory parameters was obtained. Cox proportional hazard model was used to determine the correlates of mortality.
Results Median age: 29 years (IQR: 21–56 years); male: 184 (41.3%); female: 262 (58.7%). At baseline, 173 (38.8%) were in WHO stage 3 and 4; 65 (14.6%) had CD4 count >100 cells/mm^3 and 264 (59.2%) had at least one OI. Median CD4 count was 216 cells/mm^3 (IQR: 154–498 cells/mm^3) at median survival time of 26.5 months. Survival probability at 12 months was 62.1% (95% CI 54.4 to 70.2%). Regimen changes were necessary in 66 (14.8%) to another first-line drug 54 (12.1%) and second-line 12 (2.6%). Mortality was predicted by age ≥40 years (HR 2.8, 95% CI 1.7 to 5.6); clinical stage 3and 4 (HR 3.4, 95% CI 2.1 to 4.8); CD4 count <150 cells/mm^3 (HR 2.1, 95% CI 1.2 to 4.1; weight ≤50 kg (HR 1.8, 95% CI 1.1 to 8.2); and OI (HR 2.1, 95% CI 1.6 to 9.8). Efavirenz-containing regimen had better survival with (HR 0.6 95% CI 0.4 to 0.9).
Conclusion Younger patients and those on efavirenz regimen do better. Early initiation is crucial to survival. There is therefore a need to scale-up of HIV counselling and testing services as entry point to early treatment.

02-1.4 SIGNIFICANT INCREASE FOLLOWED BY DRAMATIC DECREASE OF INFANT LEUKAEMIA RATES IN BELARUS: ADAPTIVE EFFECT OF LOW DOSE CHERNOBYL RADIATION?

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The question of whether child acute leukaemia (ChAL) incidence in most contaminated countries has changed as a result of Chernobyl remains of great interest.

We present results of age-cohort-period analyses of IR trends of ChAL from 1979 to 2006 in Republic of Belarus. Number of cases was tabulated by age at diagnosis and period of observation (preaccident, 1979–1985) and postaccident: 1986–1992, 1993–1999, 2000–2006.