Causes of death in a rural, population-based human immunodeficiency virus type 1 (HIV-1) natural history cohort in Uganda.

- **Okongo M**,
- **Morgan D**,
- **Mayanja B**,
- **Ross A**,
- **Whitworth J**.

Medical Research Council Programme on AIDS/Uganda Virus Research Institute, Entebbe.

BACKGROUND: While human immunodeficiency virus (HIV)-related causes of death have been well documented in developed countries, in Africa data are scanty and mainly based on autopsy studies from city hospitals which are highly selective and may not represent causes of HIV-associated deaths in the general population. This study, from a rural population, describes the causes of death in HIV-positive people and their HIV-negative controls. METHODS: A natural history cohort comprising HIV-1 infected participants and HIV-negative controls was established in rural Uganda in 1990. Causes of death were determined by reviewing the premorbid clinical and laboratory findings and from information obtained from relatives. Blindness to the deceased's HIV serostatus was maintained throughout. RESULTS: In all, 78 deaths occurred over a 6-year period: 63 deaths occurred in the HIV-positive cases (53 prevalent and 10 incident cases) and 15 deaths in the HIV-negative controls. Of the prevalent cases, 56%, and 9% the incident cases enrolled died, compared with 7% of the HIV-negative controls. Of the 55 HIV-positive cases with sufficient data to establish cause of death, 52 (95%) were assessed as having HIV-associated deaths and 48 (87%) died in WHO stage 4 (AIDS). The main causes of death were wasting syndrome (31%), chronic diarrhoea (22%), cryptococcal meningitis (13%) and chest infection (11%). CONCLUSIONS: Our results represent an unbiased selection of deaths in a rural area. The HIV-positive cases have high death rates and die of HIV-related pathologies. The main causes of death reflect the WHO clinical case definition of AIDS. Cryptococcal meningitis is also a common cause of death in this population.

PIP: A natural history cohort (NHC) of HIV-1-infected subjects and HIV-negative controls was established in rural Uganda in 1990. By the end of 1996, 440 participants had enrolled in the cohort: 107 prevalent cases, 108 incident cases, and 225 HIV-negative controls. The authors report the causes of death among HIV-infected cohort members over the 6-year period ending December 1996. Causes of death were determined by reviewing the premorbid clinical and laboratory findings, as well as from information obtained from relatives. All study clinic staff are blind to the HIV serostatus of participants in the NHC. 78 deaths occurred over the 6-year study period: 63 deaths among HIV-positive cases (53 prevalent and 10 incident cases) and 15 deaths among HIV-negative controls. 56% of prevalent cases, 9% of incident cases and 7% of controls died. Of the 55 HIV-positive cases with enough data to establish cause of death, 52 were determined to have HIV-associated deaths, of whom 48 died in World Health Organization stage 4 illness. Main causes of death were wasting syndrome (31%), chronic diarrhea (22%), cryptococcal meningitis (13%), and chest infection (11%).

Opportunistic infections and other AIDS-defining illnesses in Poland in 2000-2002.

- Podlasin RB,
- Wiercinska-Drapalo A,
- Olczak A,
- Beniowski M,
- Smiatacz T,
- Malolepsza E,
- Juszczyk J,
- Leszczyszyn-Pynka M,
- Mach T,
- Mian M,
- Knysz B,
- Horban A.

Hospital of Infectious Diseases, Wolska 37, 01-201, Warsaw, Poland. podlasin@cdit-aids.med.pl

BACKGROUND: The introduction of highly active antiretroviral therapy (HAART) led to a decreased incidence of the most severe opportunistic infections (OIs) in HIV-infected patients. In Poland, HAART became widely used in 1998. MATERIALS AND METHODS: This study was based on data from medical records data collected in the years 2000-2002 from medical centers for HIV-infected patients in Poland. The aim of the study was to determine the incidence of opportunistic infections (OIs) and other AIDS defining illnesses (ADIs). The chi(2) test was used to determine any significant trends. RESULTS: The incidence of ADIs was 6.8, 6.5 and 4.8/100 persons/year in 2000-2002, respectively. The most common diagnosed OIs were: fungal infections, tuberculosis, recurrent pneumonia, PCP and toxoplasmosis. In patients receiving HAART (HAART+) the incidence of ADIs was significantly lower than in non-ARV-treated as well as in all HIV+ ($p < 0.02$, $p < 0.001$, $p < 0.001$, respectively). A significant decrease in the incidence of ADIs in HAART+ patients between 2000 and 2002 ($p < 0.0001$) was observed. From 25% to 30% of ADIs among HAART+ patients were diagnosed within the first 3 months of antiretroviral therapy. In HAART+ patients the most common ADIs were fungal infections and tuberculosis. The diagnosis of ADIs resulted in the recognition of HIV status in 8.7-8.9% of patients. CONCLUSIONS: Five years after the introduction of HAART the incidence of ADIs had declined. Fungal infections and tuberculosis were the most common OIs in HIV+ patients in Poland.

Intestinal parasite isolates in AIDS patients with chronic diarrhea in Gondar Teaching Hospital, North west Ethiopia.

- Tadesse A,
- Kassu A.

Gondar University.

Chronic diarrhea is one of the major AIDS-defining illnesses in WHO Classification and occurs in 60-90% of HIV-infected patients in Africa. We did a case series study on parasite isolation in stool samples of AIDS patients with chronic diarrhea using

wet-mount, Formol-Ether concentration technique and Modified Acid-Fast staining method in Gondar Teaching Hospital between January and September 2000. Seventy AIDS patients with chronic diarrhea were included in the study. Wasting syndrome was the clinical presentation in (97%) almost all AIDS patients who had chronic diarrhea. Intestinal parasites were detected in 41 out of 70 diarrheal specimens in AIDS patients. Multiple parasitic injections were detected in three diarrheal specimens. Intracellular parasite, (29%) Cryptosporidium parvum, and mucosal parasite, (17%) Strongyloides stercoralis were the frequently isolated parasites in diarrheal specimens of AIDS patients, accounting for 80% diarrhaegen pathogens among positive specimens. Cryptosporidium parvum, under-estimated cause of chronic diarrhea in immunocompetent adults, was found to be the prominent diarrheagen in AIDS patients in this study, similar with other studies in different African countries.

Clinically directed selective screening for HIV infection in hospitalized children.

- **Bavdekar SB**,
- **Agarwal R**.

Department of Pediatrics, Seth GS Medical College and KEM Hospital, Parel,Mumbai 400 012, India. drsbavdekar@vsnl.com

BACKGROUND: As HIV infection presents with several manifestations, none of which is specific, several children are subjected to HIV testing. Very few studies have examined the issue of probability of HIV infection with a given clinical manifestation. AIM: To determine the probability of HIV infection when a child is hospitalized with at least one of the selected manifestations. MATERIAL AND METHODS: Children aged 18 mo and above, admitted to a tertiary care center in Mumbai, India with chronic diarrhea, severe malnutrition, persistent cough, generalized lymphadenopathy, oral thrush, hepatomegaly, repeated common infections, generalized dermatitis, chronic parotid swelling, recurrent bacterial infection, disseminated tuberculosis and/ or Pneumocystis carinii pneumonia were enrolled in a prospective study after obtaining informed consent. They were subjected to HIV testing using WHO-UNAIDS strategy II. The data obtained was analyzed using the Statistical Package For Social Sciences (SPSS) software program. RESULTS: Twenty-three (20 PERCENT) of the 115 children enrolled tested positive for HIV. The seropositivity rate for various features ranged from 9.1 PERCENT for chronic diarrhea to 83.3 PERCENT for chronic dermatitis. Oral thrush, generalized dermatitis and generalized lymphadenopathy were the significant independent clinical risk factors for predicting HIV seropositivity. The probability of HIV infection was higher in children who had higher number of risk factors present concomitantly CONCLUSIONS: The probability of HIV infection in a child is dependent upon the nature and number of manifestations present.

Clinical features and outcome in children admitted to a TB hospital in the Western Cape--the influence of HIV infection and drug resistance.

- **Soeters M**,
- **de Vries AM**,
- **Kimpen JL**,
- **Donald PR**,
- **Schaaf HS**.

Utrecht University Medical Center, The Netherlands.

BACKGROUND: The Western Cape has a high incidence of tuberculosis (TB) and a rising prevalence of HIV infection. Children form 15-20% of this TB burden. OBJECTIVE: To document the clinical features and outcome of TB among children admitted to a regional TB hospital. METHOD: A retrospective, descriptive study was undertaken of children under 15 years of age admitted to Brooklyn Hospital for Chest Diseases from January 2000 to December 2001. Demographic and clinical details of children were recorded routinely in a register that formed the basis of this review. RESULTS: Two hundred and thirty-eight of the 250 children admitted had TB, of whom 120 (50.4%) were boys. The median age was 25 months. Reasons for admission were disease severity in 99 cases, social reasons in 36, and a combination in 103. Adult source cases were identified in 138 instances; 9 had drug-resistant TB, 31 drug-susceptible TB and in 98 cases susceptibility was unknown. TB was confirmed by culture in 119 children. Of 79 in whom susceptibility testing was done, 10 had isoniazid-resistant TB and 8 multidrug-resistant TB. HIV serology was positive in 43 of 138 children tested (31%). Previous antituberculosis treatment, severe malnutrition and weight under the 3rd percentile for age, a negative Mantoux test, and mortality were significantly more common in the HIV-infected children. Twenty-two of 41 previously negative Mantoux tests (< 5 mm induration) were positive on retesting. CONCLUSIONS: HIV infection is common in children with TB and malnutrition, and mortality in this group is high. Repeat Mantoux tests may show an increased number of positive results.

Clinical profile of pediatric HIV infection from India.

- **Shah SR**,
- **Tullu MS**,
- **Kamat JR**.

Department of Pediatrics, Seth G.S. Medical College and KEM Hospital, Parel, Mumbai, Maharashtra, India.

BACKGROUND: Our aim was to study the clinical profile of pediatric patients admitted with HIV infection. METHODS: The prospective study was conducted from January 2000 to October 2001 at a tertiary care referral teaching hospital in Mumbai, India. Admitted in-patients (aged 1 month to 12 years) detected to be HIV-positive (on triple ELISA test) were enrolled in the study. HIV status of patients < 18 months of age was confirmed by DNA-PCR testing. Demographic data, clinical features, investigations and outcome were recorded in a pre-designed proforma. RESULTS: Fifty HIV-positive children (31 males and 19 females; M:F = 1.6:1) were enrolled. Thirty cases were completely immunized, 9 were partially immunized while 11 were not immunized. Forty-two were perinatally infected, while eight cases were infected via blood transfusion (patients with thalassemia major on chronic transfusion

therapy). Clinical features at presentation in 42 symptomatic cases included protein-energy malnutrition (90%), fever > 1 month (50%), weight loss > 1 month (50%), persistent generalized lymphadenopathy (24%) and skin manifestations (79%). The gastrointestinal (62%) and respiratory (52%) were the most commonly involved organ systems. Opportunistic infections noted included tuberculosis (19 cases), candidiasis (6 cases), Pneumocystis carinii pneumonia (4 cases), herpes zoster (3 cases) and giardiasis (1 case). Six patients died (mortality, 14%). CONCLUSIONS: Perinatal transmission is the most common mode of acquiring HIV in the pediatric age group. Most patients have protein-energy malnutrition. Tuberculosis is common in HIV-infected Indian children. Patients with HIV-encephalopathy have a poor outcome

Identifying deaths from AIDS in South Africa.

- **Groenewald P**,
- **Nannan N**,
- **Bourne D**,
- **Laubscher R**,
- **Bradshaw D**.

Burden of Disease Research Unit, Medical Research Council of South Africa, Tygerberg, South Africa.

OBJECTIVE: To quantify the HIV/AIDS deaths misclassified to AIDS-related conditions in South Africa. DESIGN: Retrospective analysis of vital registration data. METHODS: Cause-specific death rates for 1996 and 2000-2001 were calculated using vital registration cause-of-death profiles applied to a model (ASSA2000) estimate of total mortality rates by age and sex. The difference in the age-specific death rates for these two periods was examined to identify conditions where there was a noticeable increase in mortality following the same age pattern as the HIV deaths, thus likely to be misclassified AIDS deaths. RESULTS: The increase in the age-specific death rates for HIV-related deaths showed a distinct age pattern, which has been observed elsewhere. Out of the 22 potential causes of death investigated, there were nine that increased in the same distinct age pattern (tuberculosis, pneumonia, diarrhoea, meningitis, other respiratory disease, non-infective gastroenteritis, other infectious and parasitic diseases, deficiency anaemias and protein energy malnutrition) and could be considered AIDS-related conditions. The increase in these conditions accounted for 61% of the total deaths related to HIV/AIDS. When added to the deaths classified as HIV-related on the death certificate, the total accounts for 93% of the ASSA2000 model estimates of the number of AIDS deaths in 2000. CONCLUSION: As a large proportion of AIDS deaths appear to be classified to AIDS-related conditions, without reference to HIV, interpretation of death statistics in South Africa cannot be made on face value as a large proportion of deaths caused by HIV infection are misclassified.

S Afr Med J. 2006 Jun;96(6):526-9

Impact of opportunistic diseases on chronic mortality in HIV-infected adults in Cote d'Ivoire.

- **Losina E**,
- **Anglaret X**,
- **Yazdanpanah Y**,
- **Wang B**,
- **Toure S**,
- **Seage GR 3rd**,
- **N'Dri-Yoman T**,
- **Walensky RP**,
- **Dakoury-Dogbo N**,
- **Goldie SJ**,
- **Messou E**,
- **Weinstein MC**,
- **Deuffic-Burban S**,
- **Salamon R**,
- **Freedberg KA**.

Departments of Biostatistics and Epidemiology, School of Public Health, Boston University, Boston, MA, USA. lenal@bu.edu

OBJECTIVE: To estimate incidence rates of opportunistic diseases (ODs) and mortality for patients with and without a history of OD among HIV-infected patients in Cote d'Ivoire. METHODS: Using incidence density analysis, we estimated rates of ODs and chronic mortality by CD4 count in patients in a cotrimoxazole prophylaxis trial in Abidjan before the highly active antiretroviral therapy (HAART) era. Chronic mortality was defined as death without a history of OD or death more than 30 days after an OD diagnosis. We used Poisson's regression to examine the effect of OD history on chronic mortality after adjusting for age, gender, and current CD4 count. RESULTS: Two hundred and seventy patients (40% male, mean age 33 years, median baseline CD4 count 261 cells/microl) were followed up for a median of 9.5 months. Bacterial infections and tuberculosis were the most common severe ODs. Of 47 patients who died, 9 (19%) died within 30 days of an OD, 26 (55%) died more than 30 days after an OD, and 12 (26%) died with no OD history. The chronic mortality rate was 31.0/100 person-years for those with an OD history, and 11.1/100 person-years for those with no OD history (rate ratio (RR) 2.81, 95% confidence interval (CI): 1.43 - 5.54). Multivariate analysis revealed that OD history remained an independent predictor of mortality (RR 2.15, 95% CI: 1.07 - 4.33) after adjusting for CD4 count, age and gender. CONCLUSIONS: Before the HAART era, a history of OD was associated with increased chronic HIV mortality in Cote d'Ivoire, even after adjusting for CD4 count. These results provide further evidence supporting OD prophylaxis in HIV-infected patients.

J Clin Microbiol. 2006 Aug;44(8):3021-

False-positive results of enzyme immunoassays for human immunodeficiency virus in patients with uncomplicated malaria.

- **Gasasira AF**,
- **Dorsey G**,

- **Kamya MR**,
- **Havlir D**,
- **Kiggundu M**,
- **Rosenthal PJ**,
- **Charlebois ED**.

Department of Medicine, Makerere University Medical School, Kampala, Uganda.

Malaria may impact upon human immunodeficiency virus (HIV) test results. We evaluated two HIV enzyme immunoassays (EIAs) by testing 1,965 Ugandans with malaria. We found poor positive predictive values (53% and 76%), particularly with younger age. Combining EIAs eliminated false positives but missed 21% of true positives. Performance of HIV EIAs in malaria may be unsatisfactory.

Trop Doct. 2006 Jul;36(3):129-31

Increase in hospital mortality from non-communicable disease and HIV-related conditions in Bulawayo, Zimbabwe, between 1992 and 2000.

- **Bardgett HP**,
- **Dixon M**,
- **Beeching NJ**.

Department of Medicine, Mpilo Central Hospital, Bulawayo, Zimbabwe. bardgett@tiscali.co.uk

The HIV/AIDS pandemic is creating a strain on health care services in the developing world, with knock-on consequences for HIV negative patients. We looked for possible changes over time in the patterns of illness and outcomes of admission to an adult medical unit in Zimbabwe. We performed a prospective descriptive study of discharge diagnoses and causes of in-hospital ;mortality for all medical patients under the care of one consultant at Mpilo Central Hospital, Bulawayo, Zimbabwe. Two similar 7-month periods were compared in 1992 and 2000. Data recorded included: initials, sex, alive or dead status, diagnosis and HIV/AIDS status. Similar numbers of patients were admitted in 1992 and 2000 (1305 and 1369), but in-hospital mortality increased from 13.3% to 28.6% ($P < 0.001$), especially in male patients (13.1% to 33.9% $P < 0.001$). Mortality rates increased for both infectious and non-communicable diseases such as cardiac failure, stroke and diabetes. The 10 most common diagnoses were similar, apart from Pneumocystis carinii pneumonia (PCP) cases, which increased from 18 to 90. The proportion of patients clinically or serologically positive for HIV/AIDS rose from 13.9% to 51.1% ($P < 0.001$), but the number of cases of the HIV wasting syndrome (SLIM)/chronic gastroenteritis did not change significantly. In 1992 there happened to be a large number of cases of malaria transmission. Mortality related to both communicable and non-communicable diseases increased, confirming that HIV negative patients are also being affected by the strain on health services. Although based on clinical and radiological diagnosis, PCP pneumonia appears to be increasingly common in this area.

Med Trop (Mars). 2006 Apr;66(2):167-71

[Opportunistic diseases in HIV-infected patients at the Jeanne Ebori Foundation in Libreville, Gabon]

[Article in French]

- **Okome-Nkoumou M**,
- **Boguikouma JB**,
- **Kombila M**.

Departement de medecine interne et specialites medicales, Universite des Sciences de la Sante , Libreville, Gabon. okomem@hotmail.com

The purpose of this study was to determine the frequencies of opportunistic diseases among AIDS patients at the Jeanne Ebori Foundation (JEF) in Libreville, Gabon. A total 6313 file of patients treated in the internal medicine unit between 1994 and 1998 were analyzed. Findings showed that the main diseases related to AIDS classified according to seroprevalence were as follows: purigo (100%), cerebral toxoplasmosis (100%), oral candidiaisis (88%), bacteremia (87.8%), shingles (84.6%), minor salmonelosis (72%), and tuberclosis. The main diagnoses unrelated to AIDS at the JEF according to seroprevalene were typhoid (9.4%), common pneumonia (28%), bacterial meningitis (26.3%, hepatitis B (20.0%), and malaria (14%). In addition to these diseases there were nine cases of Kaposi's sarcoma, four cases of isosporosis, two cases of cryptococcosis, two cases of herpes Varicella, one case of cryptosporidiosis, and one case of isosporosis. The incidence of opportunistic disease was high in our study and must be taken in drug procurement.

Adv Parasitol. 2006;61:1-45

Control of human parasitic diseases: Context and overview.

- **Molyneux DH**.

Lymphatic Filariasis Support Centre, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool, L3 5QA, UK.

The control of parasitic diseases of humans has been undertaken since the aetiology and natural history of the infections was recognized and the deleterious effects on human health and well-being appreciated by policy makers, medical practitioners and public health specialists. However, while some parasitic infections such as malaria have proved difficult to control, as defined by a sustained reduction in incidence, others, particularly helminth infections can be effectively controlled. The different approaches to control from diagnosis, to treatment and cure of the clinically sick patient, to control the transmission within the community by preventative chemotherapy and vector control are outlined. The concepts of eradication, elimination and control are defined and examples of success summarized. Overviews of the health policy and financing environment in which programmes to control or eliminate parasitic diseases are positioned and the development of public-private partnerships as vehicles for product development or access to drugs for parasite disease control are discussed. Failure to sustain control of parasites may be due to development of drug resistance or the failure to implement proven strategies as a result of decreased resources within the health system, decentralization of health

management through health-sector reform and the lack of financial and human resources in settings where per capita government expenditure on health may be less than $US 5 per year. However, success has been achieved in several large-scale programmes through sustained national government investment and/or committed donor support. It is also widely accepted that the level of investment in drug development for the parasitic diseases of poor populations is an unattractive option for pharmaceutical companies. The development of partnerships to specifically address this need provides some hope that the intractable problems of the treatment regimens for the trypanosomiases and leishmaniases can be solved in the not too distant future. However, it will be difficult to implement and sustain such interventions in fragile health services often in settings where resources are limited but also in unstable, conflict-affected or post-conflict countries. Emphasis is placed on the importance of co-endemicity and polyparasitism and the opportunity to control parasites susceptible to cost-effective and proven chemotherapeutic interventions for a package of diseases which can be implemented at low cost and which would benefit the poorest and most marginalized groups. The ecology of parasitic diseases is discussed in the context of changing ecology, environment, sociopolitical developments and climate change. These drivers of global change will affect the epidemiology of parasites over the coming decades, while in many of the most endemic and impoverished countries parasitic infections will be accorded lower priority as resourced stressed health systems cope with the burden of the higher-profile killing diseases viz., HIV/AIDS, TB and malaria. There is a need for more holistic thinking about the interactions between parasites and other infections. It is clear that as the prevalence and awareness of HIV has increased, there is a growing recognition of a host of complex interactions that determine disease outcome in individual patients. The competition for resources in the health as well as other social sectors will be a continuing challenge; effective parasite control will be dependent on how such resources are accessed and deployed to effectively address well-defined problems some of which are readily amenable to successful interventions with proven methods. In the health sector, the problems of the HIV/AIDS and TB pandemics and the problem of the emerging burden of chronic non-communicable diseases will be significant competitors for these limited resources as parasitic infections aside from malaria tend to be chronic disabling problems of the poorest who have limited access to scarce health services and are representative of the poorest quintile. Prioritization and advocacy for parasite control in the national and international political environments is the challenge.

Southeast Asian J Trop Med Public Health. 2005;36 Suppl 4:50-9

Parasitic infections in Malaysia: changing and challenges.

- **Nissapatorn V**,
- **Lim YA**,
- **Jamaiah I**,
- **Agnes LS**,
- **Amyliana K**,
- **Wen CC**,
- **Nurul H**,

- **Nizam S**,
- **Quake CT**,
- **Valartmathi C**,
- **Woei CY**,
- **Anuar AK**.

Department of Parasitology, University of Malaya Medical Center, 50603 Kuala Lumpur, Malaysia. nissapat@hotmail.com

A total of 1,885 blood and stool samples of four main protozoan parasitic infections were retrospectively reviewed from January, 2000 to April, 2004. Eleven of the 1,350 stool samples were shown positive for Cryptosporidium and Giardia infections; one of the 5 cases was clinically diagnosed as gastrointestinal cryptosporidiosis, while 6 cases were giardiasis. In patients with giardiasis, children were among the high-risk groups, making up 66.7% of these patients. The common presenting signs and symptoms were: diarrhea (83.3%), loss of appetite (83.3%), lethargy (83.3%), fever (66.7%), nausea/vomiting (50.0%), abdominal pain (16.7%), dehydration (16.7%) and rigor and chills (16.7%). Metronidazole was the drug of choice and was given to all symptomatic patients (83.3%). For the blood samples, 28 of the 92 peripheral smears for Plasmodium spp infection were diagnosed as malaria. The age range was from 4 to 57, with a median of 32.5 years. The sex ratio (M:F) was 3.6:1, while the age group of 30-44 years was the most commonly affected in both sexes. The majority of patients were foreigners (60.7%) and non-professional (39%). Plasmodium vivax (71%) infection was the most common pathogen found in these patients, along with a history of traveling to an endemic area of malaria (31%). The predominant presenting signs and symptoms were: fever (27%), rigor and chills (24%), nausea/vomiting (15%) and headache (8%). Chloroquine and primaquine was the most common anti-malarial regimen used (78.6%) in these patients. The seroprevalence of toxoplasmosis in different groups was 258/443 (58%): seropositive for IgG 143 (32.3%); IgM 67 (15%); and IgG + IgM 48 (10.8%). The age range was from 1 to 85, with a mean of 34 (+/- SD 16.6) years. The predominant age group was 21 to 40 years (126; 28.4%). The sex ratio (M:F) was 1.2:1. Subjects were predominantly male (142; 32%) and the Malay (117; 26.4%). Of these, 32 cases were clinically diagnosed with ocular toxoplasmosis. The range of age was from 10 to 56 years with a mean of 30.5 (+/- SD 12.05) years. The sex ratio (M:F) was 1:1.7. The majority were in the age group of 21 to 40 years, female (20; 62.5%), and Malay (17; 53%). They were also single (16; 50%), unemployed (12; 37%), and resided outside Kuala Lumpur (21; 65.6%). The more common clinical presentations were blurring of vision (25; 78%), floaters (10; 31%) and pain in the eye (7; 22%). We found that funduscopic examination (100%) and seropositivity for anti-Toxoplasma antibodies (93.7%) were the main reasons for investigation. Choroidoretinitis was the most common clinical diagnosis (69%), while clindamycin was the most frequently used antimicrobial in all cases. Among HIV-infected patients, 10 cases were diagnosed as AIDS-related toxoplasmic encephalitis (TE) (9 were active and 1 had relapse TE). In addition, 1 case was confirmed as congenital toxoplasmosis.

Southeast Asian J Trop Med Public Health. 2005;36 Suppl 4:50-9

Parasitic infections in Malaysia: changing and challenges.

- Nissapatorn V,
- Lim YA,
- Jamaiah I,
- Agnes LS,
- Amyliana K,
- Wen CC,
- Nurul H,
- Nizam S,
- Quake CT,
- Valartmathi C,
- Woei CY,
- Anuar AK.

Department of Parasitology, University of Malaya Medical Center, 50603 Kuala Lumpur, Malaysia. nissapat@hotmail.com

A total of 1,885 blood and stool samples of four main protozoan parasitic infections were retrospectively reviewed from January, 2000 to April, 2004. Eleven of the 1,350 stool samples were shown positive for Cryptosporidium and Giardia infections; one of the 5 cases was clinically diagnosed as gastrointestinal cryptosporidiosis, while 6 cases were giardiasis. In patients with giardiasis, children were among the high-risk groups, making up 66.7% of these patients. The common presenting signs and symptoms were: diarrhea (83.3%), loss of appetite (83.3%), lethargy (83.3%), fever (66.7%), nausea/vomiting (50.0%), abdominal pain (16.7%), dehydration (16.7%) and rigor and chills (16.7%). Metronidazole was the drug of choice and was given to all symptomatic patients (83.3%). For the blood samples, 28 of the 92 peripheral smears for Plasmodium spp infection were diagnosed as malaria. The age range was from 4 to 57, with a median of 32.5 years. The sex ratio (M:F) was 3.6:1, while the age group of 30-44 years was the most commonly affected in both sexes. The majority of patients were foreigners (60.7%) and non-professional (39%). Plasmodium vivax (71%) infection was the most common pathogen found in these patients, along with a history of traveling to an endemic area of malaria (31%). The predominant presenting signs and symptoms were: fever (27%), rigor and chills (24%), nausea/vomiting (15%) and headache (8%). Chloroquine and primaquine was the most common anti-malarial regimen used (78.6%) in these patients. The seroprevalence of toxoplasmosis in different groups was 258/443 (58%): seropositive for IgG 143 (32.3%); IgM 67 (15%); and IgG + IgM 48 (10.8%). The age range was from 1 to 85, with a mean of 34 (+/- SD 16.6) years. The predominant age group was 21 to 40 years (126; 28.4%). The sex ratio (M:F) was 1.2:1. Subjects were predominantly male (142; 32%) and the Malay (117; 26.4%). Of these, 32 cases were clinically diagnosed with ocular toxoplasmosis. The range of age was from 10 to 56 years with a mean of 30.5 (+/- SD 12.05) years. The sex ratio (M:F) was 1:1.7. The majority were in the age group of 21 to 40 years, female (20; 62.5%), and Malay (17; 53%). They were also single (16; 50%), unemployed (12; 37%), and resided outside Kuala Lumpur (21; 65.6%). The more common clinical presentations were blurring of vision (25; 78%), floaters (10; 31%) and pain in the eye (7; 22%). We found that funduscopic examination (100%) and seropositivity for anti-Toxoplasma antibodies (93.7%) were the main reasons for investigation. Choroidoretinitis was the most common clinical diagnosis (69%), while

clindamycin was the most frequently used antimicrobial in all cases. Among HIV-infected patients, 10 cases were diagnosed as AIDS-related toxoplasmic encephalitis (TE) (9 were active and 1 had relapse TE). In addition, 1 case was confirmed as congenital toxoplasmosis.

Int J Tuberc Lung Dis. 2005 Oct;9(10):1105-11

Predictors of incident tuberculosis among HIV-1-infected women in Tanzania.

- **Venkatesh PA**,
- **Bosch RJ**,
- **McIntosh K**,
- **Mugusi F**,
- **Msamanga G**,
- **Fawzi WW**.

Department of Nutrition, Harvard School of Public Health, Boston, MA 02115, USA. pravina@post.harvard.edu

SETTING: The development of tuberculosis (TB) in HIV-1-infected individuals is associated with accelerated HIV-1 disease progression. OBJECTIVE: To examine the predictors of incident TB in HIV-1-infected Tanzanian women. DESIGN: A prospective cohort of 1078 HIV-1-infected pregnant women was enrolled in a randomized clinical trial to examine the role of vitamin supplements in HIV-1 disease progression and fetal outcomes. RESULTS: Of 1008 women evaluated for TB, 88 (8.7%) developed TB. After controlling for age, education and hemoglobin concentration, in multivariate analysis, low CD4 cell count, elevated erythrocyte sedimentation rate (ESR), decreased mid-upper arm circumference, and high viremia were associated with an increased risk of TB. CD4 <200 vs. > or = 500 cells/mm3 was associated with a 4.44-fold increase in risk of TB (95%CI 2.10-9.40). Individuals with high viremia (> or = 50,000 copies/ml) had a 2.43-fold increase in risk of TB (95%CI 1.24-4.76). Elevated malarial parasite density was slightly associated with a 65% (95%CI 19-85) decreased risk of TB. CONCLUSIONS: The risk of developing TB was elevated among women with low CD4 cell counts, elevated ESR, coinfections with other pathogens, poor nutrition and high viremia. There is a slight inverse association between malarial infection and TB, possibly because treating malaria may reduce the risk of TB.

Med Mal Infect. 2005 Jul-Aug;35(7-8):383-9

[Epidemiological, clinical, etiological features of neuromeningeal diseases at the Fann Hospital Infectious Diseases Clinic, Dakar (Senegal)]

[Article in French]
- **Soumare M**,
- **Seydi M**,
- **Ndour CT**,
- **Fall N**,

- **Dieng Y**,
- **Sow AI**,
- **Diop BM**.

Clinique des maladies infectieuses, CHU de Fann, BP 5035 Dakar, Senegal. soumarem@refer.sn

OBJECTIVES: This retrospective study was carried out to determine the prevalence of cerebromeningeal diseases at the Fann Teaching Hospital Infectious Diseases Clinic, in Dakar, and to describe their epidemiological, clinical, and etiological features. PATIENTS AND METHODS: Data was collected for analysis from patients files recorded from January 1, 2001 to December 31, 2003. RESULTS: Four hundred seventy cases were identified (11.4% of total admissions) with a M/F sex ratio of 1.38 and a mean age of 33 years. Eighty-nine patients were infected by HIV and clinical presentations included fever (78%), meningeal syndrome (57.4%), coma (64.9%), convulsions (19%), focal neurological deficits (15.5%), and cranial nerves dysfunction (7.2%). Etiologies presented as cerebral malaria (85 cases), purulent meningitis (51 cases), neuromeningeal cryptococcosis (37 cases), tuberculous meningitis (11 cases), intracranial abscess (10 cases), toxoplasma encephalitis (4 cases), cerebrovascular attack (11 cases), and cerebromeningeal hemorrhages (3 cases). In as many as 248 cases (52.8%) no etiology could be found. The case fatality rate was 44.5% overall (209 deaths) and 68.5% among HIV-infected patients. Neurological sequels were found in 22 survivors (8.8%), consisting in focal neurological deficit (12 cases), deafness (5 cases), diplopia (2 cases), dementia (2 cases), postmeningitic encephalitis (1 case). CONCLUSION: These results show the need to improve our technical capacities in our diagnostic laboratories, the prevention of opportunistic infections in the course of HIV/AIDS infection, and the involvement of various specialists in the management of cerebromeningeal diseases.

Infect Dis Clin North Am. 2005 Mar;19(1):121-35, ix

The impact of HIV infection on tropical diseases.

- **Harms G**,
- **Feldmeier H**.

Institute of Tropical Medicine, Charite-University Medicine Berlin, Spandauer Damm 130, 14050 Berlin, Germany. gundel.harms@charite.de

HIV and tropical infections affect each other mutually. HIV infection may alter the natural history of tropical infectious diseases, impede rapid diagnosis, or reduce the efficacy of antiparasitic treatment. Tropical infections may facilitate the transmission of HIV and accelerate progression from asymptomatic HIV infection to AIDS. This article reviews data on known interactions for malaria, leishmaniasis, human African trypanosomiasis, Chagas' disease, schistosomiasis, onchocerciasis, lymphatic filariasis, and intestinal helminthiases.

Hepatic pathology in AIDS: a pathological study from Mumbai, India.

- **Lanjewar DN**,
- **Rao RJ**,
- **Kulkarni SB**,
- **Hira SK**.

AIDS Research & Control Centre, Grant Medical College and Sir J.J. Group of Hospitals, Byculla, Mumbai, India. arcongov@vsnl.com

OBJECTIVES: To assess the spectrum of hepatic disorders in AIDS, liver specimens from 171 patients (155 autopsies and 16 biopsies) were reviewed. METHODS: A retrospective and prospective study of 171 autopsy and biopsy specimens was carried out at a tertiary level hospital in Mumbai, India. RESULTS: Of the patients included in the study, 127 (74%) were male and 44 (26%) were female. The heterosexual route was the predominant mode of HIV transmission, identified in 163 (95%) patients. A total of 99 of 171 patients (58%) showed significant pathological lesions, and the most common pathological processes involving the liver appeared to be secondary to infections. None of our patients showed isolated infectious diseases of the liver. The spectrum of liver diseases identified was as follows: tuberculosis in 70 patients (41%), cryptococcosis in eight (5%), cytomegalovirus infection in six (3%), hepatitis B infection in five (3%), candidiasis in one (0.5%), malaria in one (0.5%), cirrhosis in six (3%), amyloidosis in one (0.5%) and primary hepatic lymphoma in one (0.5%). CONCLUSIONS: AIDS patients were found to have a high prevalence of underlying hepatic abnormalities. The spectrum of disease among patients with AIDS in India differs from that in developed countries. Our results suggest that hepatic tuberculosis is more common in AIDS than previously recognized, and that liver specimens should be examined routinely for the presence of acid-fast bacilli.

Binding of glycoprotein 120 and peptides from the HIV-1 envelope by autoantibodies in mice with experimentally induced systemic lupus erythematosus and in patients with the disease.

Bermas BL, Petri M, Berzofsky JA, Waisman A, Shearer GM, Mozes E.

Experimental Immunology Branch, National Cancer Institute, NIH, Bethesda, Maryland 20892.

Systemic lupus erythematosus (SLE) and infection with the human immunodeficiency virus type 1 (HIV) are diseases that are characterized by immune dysregulation and autoantibody production. In this article we identify and characterize IgG antibodies from mice with SLE and SLE patients that bind HIV gp120 and HIV envelope-derived peptides. SLE can be induced in susceptible mouse strains by immunization with a human monoclonal anti-DNA antibody that bears a common idiotype designated 16/6 Id. We tested sera from various strains of mice in which experimental SLE was induced by this method, as well as from 93 patients with SLE and 31 controls (17 healthy controls, 14 patients with other autoimmune diseases) for the presence of antibodies reactive to gp120 by an

ELISA. Antibodies reactive with gp120 were produced by BALB/c, C3H.SW, AKR, and DBA/2 mice, all of which were 16/6 Id immunized and had experimental SLE. C57BL/6 mice, which are resistant to induction of SLE by this method, did not produce antibodies reactive with gp120 despite 16/6 immunization. Forty-three percent of SLE patients made antibodies that bound to gp120 at titers greater than 1:40, whereas 12% of healthy control sera ($p < or = 0.02$) and 14% of patients with other autoimmune diseases contained such antibodies ($p < or = 0.05$). We delineated the specificity of this antibody activity by testing for reactivity to six HIV envelope peptides. In both mice and SLE patients, sera reactive with gp120 recognized the same three envelope peptides. Removal of the anti-DNA antibodies from the sera by DNA-agarose affinity purification did not change anti-gp120 specificity.

PMID: 7826694 [PubMed - indexed for MEDLINE]

1: Am J Epidemiol 1997 Aug 15;146(4):350-7

Related Articles, Books, LinkOut

Infection with human immunodeficiency virus type 1 (HIV-1) and human T cell lymphotropic viruses among leprosy patients and contacts: correlation between HIV-1 cross-reactivity and antibodies to lipoarabinomannan.

Kashala O, Marlink R, Ilunga M, Diese M, Gormus B, Xu K, Mukeba P, Kasongo K, Essex M.

Department of Cancer Biology, Harvard School of Public Health, Boston, Massachusetts 02115.

To determine the association between leprosy and human retroviral infections, 57 leprosy patients, 39 leprosy contacts, and 500 pregnant women were investigated serologically for antibodies to human immunodeficiency virus type 1 (HIV) and human T cell lymphotropic virus (HTLV) types I and II. Antibodies to Mycobacterium leprae phenolic glycolipid I (PGL-I), and lipoarabinomannan (LAM) were also analyzed. A low prevalence of HIV-1 infection was observed among leprosy patients (3.5%), leprosy contacts (0), and pregnant women (3.6%). Antibodies to HTLV-I but not -II were found more often in leprosy patients (8.7%) and contacts (12.8%) than in pregnant women (0). Sera from leprosy patients and leprosy contacts were often false-positive for HIV-1 by ELISA and were indeterminate by Western blot. LAM IgM and PGL-I IgM antibodies in sera from leprosy patients yielded significant cross-reactivities with HIV-1 pol and gag proteins. These data suggest that mycobacterial cell wall antigens may share common epitopes with HIV. Caution should be exercised when interpreting HIV-1 ELISA and Western blot data from regions where leprosy or other mycobacterial diseases are endemic.

PMID: 7906291 [PubMed - indexed for MEDLINE]

Studies with canine sera that contain antibodies which recognize human immunodeficiency virus structural proteins.

Strandstrom HV, Higgins JR, Mossie K, Theilen GH.

College of Veterinary Medicine, Helsinki, Finland.

In a serological survey, using the immunoblotting technique, we found that substantial numbers of dog sera from both normal and diseased dogs, including dogs with neoplasia, reacted with one or more human immunodeficiency virus (HIV) recombinant proteins.
A total of 144 dog sera were tested, and 72 (50%) of them
reacted with one or more HIV recombinant structural proteins. Ten dog sera were also tested for reactivity with simian immunodeficiency virus (SIV), feline immunodeficiency virus (FIV), and caprine arthritis encephalitis virus (CAEV).Six dog sera reacted with at least the major core protein of HIV, while one of the dog sera tested reacted with SIV core protein, and there were no reactions with the viral proteins of either FIV or CAEV. Cell extracts from canine peripheral blood lymphocytes cocultivated with human cells and an extract of human cells infected with HIV were immunoblotted against dog sera which previously tested positive
or
negative on HIV recombinant protein commercially available Western blot strips. Two lymphocyte lysates and the HIV-infected Hut cell lysate reacted with the Western blot strip-positive dog serum; however, no reactions were seen with the Western blot strip-negative dog serum.