HIV

93. Study of the Trend of HIV in Cases of Tuberculosis

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Objective: To study the trend of HIV seroprevalence in cases of tuberculosis and to compare the relative seroprevalence in different types of tuberculosis, in an area of relatively low HIV seroprevalence and high prevalence of tuberculosis.

Methods: A total of 130 patients (presenting to Lady Hardinge Medical College, New Delhi, India) diagnosed to have tuberculosis by a combination of clinical, microbiological, pathological and biochemical criteria (as relevant to each case); were screened by Enzyme linked Immunosorbent assays (ELISA) for antibodies to HIV-1 and HIV-2 according to the guidelines laid down by NACO.

Results: The patients were divided into 3 broad subgroups (according to the site of involvement), pulmonary (54 patients, 41%), extra-pulmonary (48 patients, 37%) and disseminated (28 patients, 22%). Of the extra-pulmonary tuberculosis cases, the profile of involvement was abdominal tuberculosis (8 cases, 6.15%), pleural tuberculosis (14 cases, 29.16%), pericardial tuberculosis (2 cases, 1.53%), meningeal tuberculosis (10 cases, 7.69%), central nervous system tuberculosis (6 cases, 4.61%), cold abscess (2 cases, 1.53%), lymph node tuberculosis (6 cases, 4.61%). The HIV seroprevalence was 3.70% (2 cases) in the pulmonary subgroup, 8.33% (4 cases) in the extrapulmonary subgroup and 7.14% (2 cases) in the disseminated subgroup. The overall seroprevalence of HIV was 6.15% (8 cases). There was no statistically significant difference in the seroprevalence of HIV among the 3 subgroups (P<0.05).

Conclusion: The rationale of mandatory HIV testing in all cases of tuberculosis is still not clear. However, long term studies including a large number of patients are required to evaluate the significance of this strategy. Further implications of this study and its results are to be discussed.

95. Haematological Profile of HIV Positive Patients

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Sixty patients infected with the HIV admitted to the medical wards were studied with respect to the haematological profile, bone marrow abnormalities and opportunistic infection. There was a male preponderance with 70% cases being males and 30% females. The highest number of cases were in the age group of 20 to 40 years. 58% of patients in the study had a haemoglobin of less than 10 gm%. Peripheral blood macrocytosis was noted in 10 cases, 7 of which had megaloblastic picture on the marrow. Neutropenia was uncommon. Thrombocytopenia was also relatively common seen in 30% cases. Bone marrow abnormalities like plasmacytosis and vacuolation were very common and affected all the cell lines. Plasmacytosis - 75%, atypical lymphocytosis - 40%, increased eosinophil precursors - 30%, megaloblastosis - 15%, vacuolation - 25% of patients. Tuberculosis is by far the commonest opportunistic in this study. Bone marrow involvement by mycobacteria was seen in 7 patients with positive ZN stain for AFB.

102. Highly Active Anti-Retroviral Therapy (HAART) in Tertiary Care Hospital: Initial Experience

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We report the tolerability and outcome of 80 cases of HIV infection on Highly active antiretroviral therapy consisting of Zidovudine, Lamivudine and Nevirapine (HAART). The indications for starting HAART in these patients were CD4 counts <200/mm3 and presence of opportunistic infection irrespective of CD4 counts as per WHO criteria. Tuberculosis (TB) was the main opportunistic infection seen in 50 (62.5%) of cases. In 45 of such patients, four drug antitubercular drugs (ATT) were given initially for two months before institution of HAART. Five cases of AIDS with TB were started simultaneously on HAART and ATT in a novel protocol using increased doses of Nevirapine. HIV wasting syndrome was seen in 4 (5%) cases. Mean CD4 count of patients instituted on HAART was 106/mm3; 30 patients had completed more than 6 months of HAART. 90% of these patients tolerated HAART well and have had considerable subjective improvement. Mean rise in CD4 counts seen in these patients was 80/mm3. Compliance to HAART was good in 72 cases (90%). The common adverse effects noted in these patients were drug induced anaemia 8 cases (10%), leucopenia 4 cases (5%) and thrombocytopenia 6 cases (7.5%). 3 (3.75%) patients developed mucocutaneous drug reactions though it was severe enough in only one patient necessitating discontinuation of HAART. 6 (7.5%) cases developed mild neuropathy. 12 (15%) had GI side effects, though only 2 patients had to discontinue HAART due to this. No HAART related deaths were noted. One patient died while on HAART due to disseminated tuberculosis.

Conclusion: Indian patients tolerate HAART (2 NRTIs + 1 NNRTI regime) well and there can be considerable improvement in overall symptomatology.

*104. Sexual Behaviour Patterns Among Individuals with HIV Infection: Introduction of a Novel Scoring System

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Aims and Objectives: To study the sexual risk-taking behaviour among HIV-infected individuals, to device a new scoring system to assess the various aspects of this behaviour, and to study its potential epidemiological applications.

Material and Methods: A prospective study from March 2001 to June 2003 at a tertiary care centre in southern India. HIV-infected individuals who acquired the infection through the sexual route were interviewed and the details of their practice of high-risk sexual behaviour were noted. A new scoring system was devised based on the following parameters: 'NO' - number of times a subject participated in high-risk sexual behaviour till date; 'PA' - number of persons with whom the subject involved in
high-risk sexual behaviour (the number of sexual partners) till date; 'FI' - duration (in years) since the first high-risk sexual behaviour (in years), from the time of present clinical examination; 'LA' - duration (in years) since the last ever high-risk sexual behaviour from the time of present clinical examination; 'C' - category of people with whom the subject involved in high-risk sexual behavior, further defined as: category A - commercial sex workers (CSW) alone, category B - acquaintances of the HIV-infected individual (other than the spouse) who are not commercial sex workers, and category C - persons belonging to both category A and B.

Results: The details of sexual behaviour could be elicited in 48 HIV-infected individuals. The mean number of times a subject involved in high-risk sexual behaviour ('NO') was 81.5 (range 1-1500). The mean number of persons with whom a subject involved in high-risk sexual behaviour ('PA') was 52 (range 1-1000). The mean duration since the first high-risk contact ('FI') was 11.6 years (ranges 3-30 years). The mean duration since the last high-risk contact ('LA') was 5.28 years (range 1 month - 20 years). Exposure to commercial sex workers alone (category A) was noted in 22/48 individuals (45.8%); to persons known to the index case (category B) in 16/48 (33.3%) cases; and, to people of both categories (category C) in 10/48 (20.8%) individuals ('C').

Conclusions: The sexual behaviour among HIV-infected individuals was heterogeneous. The present study found that individuals acquiring HIV infection through the sexual route had a large number of sexual partners, and persisted with a high-risk behaviour for several years before the infection was discovered. Interestingly, the partners of these infected individuals were not only commercial sex workers, but also comprised people not belonging to the 'core groups'. The NOPAFILAC score can be used to assess the intensity and frequency of high-risk sexual contacts in HIV-infected individuals. It also indicates the number of persons likely to be infected by the index case. Other useful epidemiological information that can be obtained from this scoring system include the average incubation period of HIV infection in an individual, and the likelihood of transmission of HIV infection from the low-risk to the high-risk subgroups within a given population.

105. Comparative Study of Intervenous Amphotericin-B and Intravenous Fluconazole in Patients of Acquired Immuno-Deficiency Syndrome (AIDS) with Cryptococcal Meningitis

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Aim and Object: To study the clinical course and treatment outcome of Cryptococcal meningitis with intravenous Amphotericin-B vis-a-vis intravenous Fluconazole in patients with AIDS.

Method: Two hundred forty patients, aged 26-45 years, with AIDS admitted during the study period from January 2002 to January 2004 with features of meningitis were evaluated with detailed history, clinical examination and investigation after proper counselling and consent. Diagnosis of Cryptococcal meningitis was based on positive Indian ink preparation, positive fungal culture of CSF for cryptococcus and serum cryptococcal antigen (CALA). Routine examination of blood, imaging study of chest and brain, different antigen test, CD4 cell count and fundoscopy were done in all the patients. 53 patients who were found to be cases of cryptococcal meningitis were divided into two groups.

CSF analysis with culture of each patient was done weekly in both the groups till sterility of CSF.

Group I - Twenty seven patients were put on intravenous Amphotericin-B (0.7 mg/kg/body weight)

Group II - Twenty six patients were treated with intravenous Fluconazole (200 mg twice daily).

Exclusion criteria: Patients on antifungal, antiretroviral, hepatotoxicity, renal toxicity, drug rashes during study period.

Result: Out of the 53 patients (22.08%) who had Cryptococcal meningitis 38 were male and 15 were female. The common clinical symptoms in both groups were severe headache (100%), nausea and vomiting (95%), irritability (90%), neck rigidity (50%), incoherent talk (48%), blurring of vision (45%) and fever (30%). In Group I, 25 patients responded clinically on the 3rd day and CSF became sterile on the 14th day. Two patients whose CD4 cell count were 1 and 5 expired on the 3rd day; In Group II, 20 had clinical response on the 5th day and CSF became sterile on the 21st day. Six patients who did not respond clinically at the end of 2nd week were put on to intravenous Amphotericin-B and the response matches to that of Group I.

Conclusion: Cryptococcal meningitis was present in over 22% of AIDS patients whose CD4 cell count < 150 cells/cumm. Majority of the patients responded to therapy except those with very low CD4 cell count. Amphotericin-B group appears to be more effective than Fluconazole group.

108. Tuberculosis in HIV Disease

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Background: Tuberculosis is the commonest opportunistic infection in HIV patients in the developing nations. We studied the incidence and patterns of tuberculosis at the HIV Referral Centre, at Medical College, Kolkata.

Material and Methods: Two hundred and fifty seven HIV patients attending our facility were investigated to establish the presence of tuberculosis. The clinical work-up included a detailed history and a thorough clinical examination. Lab investigations included a complete blood count, Mantoux test, CD4 counts, chest X-ray, sputum for AFB, routine examination of stool and urine, USG whole abdomen in all patients. CSF study and CE CT scan of the brain, lymph node biopsy and serous fluid analysis were performed as indicated.

Results: 93 (36.2%) patients had Koch’s infection, with pulmonary involvement being commonest (61%). Organs involved included meninges (23.7%), peritonem (19.4%), pleura (15.1%) lymph nodes (11.8%), small intestine (7.9%), pericardium (5.4%), joint (1.1%), and the renal pelvis (1.1%). The incidence of multi-drug resistance was 15.1% and of multi-organ involvement was 46.2%, both being positively co-related with advanced immunosuppression (CD4 < 200).

Conclusion: The high incidence of HIV associated tuberculosis and the frequency of atypical presentations necessitates a high degree of suspicion to diagnose this co-infection.

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