Seroprevalence of HIV among blood donors in a teaching hospital at Kolar, South India

Sir,

Mandatory screening of all donors for such infections has significantly reduced the problem, but not completely eliminated such risk because the donor may be at the window period or may lack sufficient response for our tool to detect it. The risk of such infection is clearly higher in recipients of blood obtained from a commercial source, compared to blood from volunteer donors.[1]

A 10‑year study of the blood bank donor records from January 2001 to December 2009 was undertaken in our institute, located in Kolar, which serves as a tertiary center. Donors were screened according to the standard operating procedures (SOP).

All the units were screened for HIV‑1 and 2 by enzyme‑linked immunosorbent assay (ELISA) using Vironostika HIV Uni‑Form 11 Ag/AB Elisa kit, which is a IV generation HIV screening test based on one‑step “sandwich” method. For confirmation, Western Blot (J ‑ Mitra Co., India) was done. Test methodology was followed as per the kit insert. The results were interpreted as per the World Health Organization (WHO) guidelines. The seropositive cases were referred to the Integrated Counselling and Testing Centre (ICTC).

Total number of donors was 36,700 (100%), with male donors 35,000 (86%) and female donors 1700 (14%). First-time donors were 16,700 (85%) and repeat donors were 20,000 (15%). The seroprevalence of HIV was 0.027 (95% CI = 0.15‑0.25). There were no significant differences among the different categories of age, sex, and time of donation (P > 0.05). The seroprevalence of HIV was marginally higher in volunteer donors than in replacement donors (P > 0.05).

HIV testing is offered by both government and private institutions with no uniform, national information grid for HIV testing. Hence, prevalence is estimated based solely on sentinel surveillance mechanism.[2] The majority of the laboratories in India do not participate in quality‑assurance and quality‑control programs.[3] Results are often inaccurate because of the following reasons: Expired test kits are used, kits are not stored at the correct temperature, air‑conditioning is erratic, and tubes, tips, and other equipments are often recycled. In addition, laboratories do not provide pre‑and post‑test counseling facilities.[3]

Diagnosis of HIV infection remains a challenge because of unresolved ethical, technical, and personnel issues. Health counseling is a new concept in India.[4] Rural population is much less proactive in seeking health care benefits. HIV counseling involves discussing the sexual lifestyle of the clients which again remains a taboo and is considered as a social stigma.[4] HIV testing is neither anonymous nor confidential, with scant regard for the privacy with the laboratories readily providing the test results without proper verifications.[2]

The exploding epidemic in India calls for radical and courageous steps and a departure from previous public health planning.[5] We need to remind ourselves of the enormous task at hand: The establishment of quality‑assured HIV testing centers, expansion of clinical facilities that provide HIV care, increased access to drugs with attendant laboratory facilities, and enhanced psychosocial support for those living with or affected by HIV.[5]
Hemophagocytic lymphohistiocytosis in an infant with probable HIV infection

Sir,

A 2‑month‑old boy born to Human Immunodeficiency Virus (HIV) infected parents presented with fever, cough, breathlessness, and refusal of feeds for 8 days. Parents were detected to be HIV infected during 6th month of gestation. However, no antiretroviral therapy (ART) was given to the mother and she delivered the baby vaginally at 40 weeks of gestation. Birth weight was 3.0 kg and child was given breast feeds. On examination, heart rate was 130/min, respiratory rate was 30/min, and chest was clear. There was hepatosplenomegaly with pallor. Investigations showed pancytopenia (hemoglobin = 7.5 gm/dl, white blood cells (WBCs) =4,900/mm³ (50% polymorphs, 48% lymphocytes), platelets = 85,000/mm³), with erythrocyte sedimentation rate of 56 mm at end of 1 h. Peripheral smear showed presence of hemophagocytes and bone marrow examination showed poor erythropoiesis with occasional hemophagocytes with fibrosis. Serum fibrinogen was 200 mg/dl (normal: 150 ‑200 mg/dl) and triglycerides were 148 mg/dl (normal: <200 mg/dl). D‑dimers were >3,000 and liver function tests were normal. CD4 count was 930 cells/mm³ with CD4:CD8 ratio of 2:1. HIV DNA PCR test was advised; however child went discharge against medical advice. Though our patient did not have hypofibrinogenemia and hypertriglyceridemia, he had hemophagocytes along with fever, splenomegaly and cytopenia suggestive of hemophagocytic lymphohistiocytosis (HLH).

HLH is a potentially fatal disease in children with an annual incidence of approximately 1.2 million cases. [1] Death usually occurs if prompt treatment is not given. [2] Cases of HIV‑associated HLH are being increasingly reported [3] but most of these involve late stages in HIV infection. [4] An autopsy study of HIV patients has revealed that nearly 20% of HIV patients have associated hemophagocytosis. [5] Rarely is HLH diagnosed during the acute or seroconversion stage of AIDS. [3] Antiretroviral therapy (ART) in cases of HLH with HIV has proved to be successful. [6] In India, cases of HLH associated with perinatal tuberculosis, dengue fever, Epstein‑Barr virus (EBV), cytomegalovirus (CMV), and bacterial agents have been reported in children but rarely or rather never has a case of HIV associated with HLH been reported. [7] Our patient was born to HIV positive parents. Moreover, the mother did not receive ART during pregnancy and breast fed him after delivery increasing the risk of transmission of HIV to the child. However, whether the child was HIV infected or not, could not be established and was suspected to have probable HIV infection based on his clinical presentation.

Thus, it can be concluded that HLH associated with probable HIV infection can occur in infants.

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