HIV Infection in Multi-transfused Thalassemic Children

HIV infection has emerged today as a most alarming disease and one of the worst effects of blood transfusion. The first case of transfusion associated AIDS in the pediatric age group was reported in 1983 in an infant(l). Patients with thalassemia require regular blood transfusions and thus form a vulnerable group for transfusion associated Acquired Immunodeficiency Syndrome (AIDS). Some studies from Delhi have reported HIV seropositivity as 9.3(2) and 8.9(3) % in thalassemic children" while others have observed all their multitransfused thalassemic children as seronegative(4). An earlier study from this institute showed that all 100 thalassaemic children tested were seronegative in 1989-1990(5). We screened 223 multitransfused thalassaemic patients in the age group of 1 to 25 years (mean age 5.86 years). This study included 167 males and 56 female children who have been receiving blood transfusion at 2-3 weekly intervals. Serum of each patient was tested for HIV antibodies by ELISA and all positive cases were confirmed by Western Blot. Eight children (3.58%) showed ELISA positivity and only three out of these 8 cases were Western Blot (WB) positive. Two WB positive cases are asymptomatic and are on regular follow up. One WB positive child is lost to follow up.

The blood requirements of Blood Transfusion Department are met either by voluntary blood donation or by replacement donors but no professional donors are accepted. All the blood units since early 1992 are screened for transfusion transmissible diseases before issuing. One reason for this HIV seropositivity could be that all these positive cases had received blood units from other blood banks also, possibly unscreened ones, as mandatory blood testing is not strictly followed at some centres. Another reason could be getting untested blood transfusions before HIV screening became mandatory. Every effort should be made to give HIV screened blood units. Though HIV screening is mandatory still most of the blood banks do not follow it strictly. Professional blood donors should not be accepted under any circumstances. Public should be made more aware regarding self-exclusion of high risk group and blood banks should not be used as centres for knowing HIV status. Getting no or low HIV seropositivity at some blood centres should not slacken HIV screening programmes in this AIDS era. All new cases requiring regular blood transfusion need testing for anti HIV antibodies so as to have baseline data and screening of these patients should be undertaken at regular intervals to rule out any seroconversion.

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Comments

There is no doubt that HIV infection leads to the development of dreaded AIDS disease. Blood and blood products are the potential source of HIV infection in patients who need multiple blood transfusion or blood products for their survival. HIV infection can also be transmitted through infected needles, syringes, and by surgical instruments. It has often been observed that patients get hemoglobin and other biochemical investigations from laboratories and hospitals which draw blood with glass syringes which are not adequately sterlized. Even the disposable syringes are being recycled by smaller units which should ideally be discarded. Such disposable syringes are potential source of spread of various infections including HIV infection.

Kumar and colleagues have been using blood from voluntary donation or by replacement. Prevalence of HIV infection in such donors is low and the possibility of HIV infection in voluntary donor is low (10.3%) as reported by ICMR(l). Blood from such donors may be infectious even in the absence of antibodies (window period). Thus Kumar *et al.* are not justified to state that HIV infection in their series has only occurred following blood transfusion from other banks. One of our patients(2) on follow up became seropositive after 6-8 weeks of minor surgery in nursing home. All blood transfusion administered to him were negative by ELISA. We believe that he developed HIV infection following surgical procedure. However, the possibility of transmission of HIV infection through blood could not be completely excluded. There is need to undertake studies for HIV-II infection as well in India.

Screening of blood for HIV infection is though mandatory but is often not followed in many banks. The National AIDS Control Organization need to ensure that the testing of blood for HIV infection is strictly followed with high standards of quality control. In addition, it should undertake punitive measures on those who fail to undertake the screening of HIV and follow its guidelines.

However, in the present circumstances,