

PREVALENCE OF HIV-INFECTION AMONG BLOOD DONORS

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ABSTRACT

Blood donor screening for HIV antibody was carried out at Blood Transfusion Service of Jinnah Postgraduate Medical Centre. Sera of 1655 blood donors were tested by Enzyme linked Immuno-Sorbent Assay (Abbott recombinant HIV -EIA) from March, 1987 to December, 1989. Initial reactivity was noted in seven cases, of which three were repeatedly reactive. When these were tested by western blot at National Institute of Health, all were reported negative. Thus no HIV positive blood donor was found in the subject population (JPMA 41: 253, 1991).

INTRODUCTION

Acquired immuno-deficiency Syndrome (AIDS) a major threat to global health, was first linked to blood transfusion in 1982- 1983¹. Since then well documented cases of blood transmitted AIDS have been reported². The gravity of the situation has resulted in creation of global safety blood initiative by World Health Organization in 1988³. This study was initiated as 3% blood donors in Indore - India were found positive for HW. Two cases of AIDS following blood transfusion were detected at this Centre and a paid blood donor in Karachi was found HW-positive⁴⁻⁶.

PATIENTS AND METHODS

From March, 1987 to December, 1989, 1655 blood donors who volunteered their blood for HIV testing were included in the study. Thirteen hundred ninety nine were paid and 256 unpaid donors. All paid donors were between 20 to 45 years of age and had been donating blood for more than two years. The unpaid were voluntary as well as family donors between the age; of 18 to 50 years. Donors with a history of promiscuity and I/V drug abuse were excluded. Sera were screened for HW antibodies with enzyme linked immunosorbent assay using Abbott recombinant HIV-1 kits according to manufacturer's instructions. Results were read on preprogrammed spectrophotometer Quantum II. Test ratios of reactive samples were calculated by dividing patient index value with cutoff point to estimate the degree of reactivity. Initial reactive sera were retested and repeatedly reactive samples were sent to the National Institute of Health, Islamabad, for confirmation by Immunoblot assay.

RESULTS

Out of 1655 blood donors, 7 (0.4%) were initially found reactive by EIA, all of whom were paid donors. However, only three (0.18%) of the seven cases appeared repeatedly reactive. All the samples were tested by Immunoblot at NIH Islamabad and found negative.

DISCUSSION

Screening of blood and its products before transfusion is one of the most important measures in prevention of spread of AIDS virus especially in areas of low prevalence⁷. In countries like Pakistan where blood transfusion services are inadequate, blood donation is mainly paid, commercial blood banks are running parallel to voluntary and government services and no donor selection criteria is observed; therefore, the chances of epidemics of blood borne diseases are significant. The situation is further aggravated by the life style of paid donors which includes living away from families, frequent homosexual contacts, promiscuity and drug abuse, the factors which make them vulnerable to all sorts of infections. Zuberi et al⁸ have reported high frequency of HBs Ag in blood donors. Most of the professional donors sell their blood three to four times every month at different places with different identification. Since AIDS has a very long asymptomatic incubation period⁹ an infected apparently healthy index donor can transmit the infection to about 30 recipients annually. In the present study we did not find any evidence of HP/infection which is not in conformity with the earlier reports^{5,6}. This could be due to the fact that donors belonging to the high risks were excluded from present study or the donors who might have transmitted the disease have avoided the test or they were too ill to sell their blood or they might have died of AIDS. Whatever may be the reason, it is apparent that the incidence of AIDS in Pakistan is not high and, therefore, the time of active intervention is not lost. By taking appropriate steps in the right direction, the nation can be kept free from AIDS menace, such as, establishing a national AIDS programme, emphasizing on public education about AIDS and its prevention. A national blood transfusion committee could be formed to ensure the safety of blood and its products in accordance with minimum targets for blood transfusion services and global safety blood initiative^{10,11}.

ACKNOWLEDGEMENT

We acknowledge the assistance and guidance of Dr. Syed Mohsin Mi, Director, Jinnah Postgraduate Medical Centre and Dr. M.R.A. Hashmi, Assistant Professor, Blood Bank, in conducting the study. Thanks are also due to Mr. Mansoor Gadiali and Shujaat Hussain for technical work and Mr. Shakeel Khan and Shoaib Mohammed Siddiq for typing the manuscript.

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