BLOOD TRANSFUSION - A POTENTIAL SOURCE OF HIV/AIDS SPREAD

Pages with reference to book, From 1 To 1

Syed Abdul Mujeeb (Blood Transfttsion Service, Jinnah Postgraduate Medical Centre, Karachi.)

In 1988, when a paid blood donor and two recipients were reported HIV/AIDS positive and later relatively high prevalence of HIV infection was found in multi transfused patients, it became obvious that blood transfusion services will be a potential source of AIDS spread in general population[1-3]. These fears were primarily based on the fact that un HP/-screened blood is being used for transfusion all over the country and most of the blood for transfusion comes from paid blood donors[4]. There are more than 200 blood banks in government, non-government, political, religious and ethnic sector to meet our well over one million units requirement of blood each year. More than 50% of these requirements come through paid donors, who live away from their families and indulge in drug addiction and sexual promiscuity[5]. Each donor may donate blood 3-4 times a month on an average depending on the need and type of blood. Voluntary blood donors are young, often go abroad for education, employment, business and joy trips and are likely to acquire HIV infection and transmit it to others, through blood donation at home. Voluntary blood transfusion organisations in their effort to collect more and more blood usually do not observe any criteria for selection of donors. Commercial organisations with the exceptions of a few select cheap quality testing materials and poor quality of blood in order to meet competitive market prices. Blood transfusion, despite all potential dangers it carries, is a popular form of treatment. It is very frequently prescribed in cases where it is not medically indicated. It is considered an energizer by many which immediately improves the health and efficiency of a person. Screening of blood and its products for HIV antibodies is considered the most effective method of prevention of blood transmitted lilY infections. At present ELISA (enzyme linked immunosorbent assays) is the most frequently used method for laboratory detection of HIV specific antibodies. It is useful in screening large number of samples in blood banks but not for small blood banks and hospitals where small numbers of samples are intermittently tested. Other screening methods, such as particle agglutination and immunodot tests, are also available for routine use. Such tests are popular as they require no instrumentation; they can be read visually and are also very rapid; in some instances they can be performed in less than 10 minutes. They arc more expensive than ELISA and are useful when blood is required urgently. These methods, though highly sensitive, specific (over 99% and almost 100%) and reproducible but are not completely free from false positive and false negative reactions[6]. To prevent blood transmitted infection all units of blood and blood products issued for transfusion should be screened for antibodies against HIV. There is no evidence that screening for HIV antigen increases the safety of blood transfusion beyond that obtained by anti LILY screening[6]. In countries where prevalence of the disease is low, testing of a pool of 5 sera is more cost effective than individual samples[7]. Considering potential risk of false negative reactions particularly in those cases where sero conversion has not taken place in lily infected persons, all high risk behaviour blood donors including paid blood donors should be excluded and all unnecessary blood transfusions should be avoided. Autologus blood transfusion is the most safe and cost effective method of blood transfusions which needs no compatibility and screening tests. It is an effective procedure for patients undergoing elective surgery. The patients' blood is collected prior to surgery so that at operation one or more units of either whole blood or red blood cells are available for blood replacement if operative blood loss necessitates transfusion. Intra operative salvage of blood from a wound or body cavity during the surgery and its reinfusion is another safe method of blood transfusion[8]. To prevent unnecessary blood

transfusions it is necessary to prevent anaernias and other disorders that require blood transfusions by improving overall health care system in the country. Training of doctors in prompt and meticulous surgical care to prevent excessive blood loss, preparation and supply of blood components rather than whole blood and education and promotion of the use of alternatives like crystalloids and colloids as volume expanders are also needed in this regard.

References

1. Khanani, R.M.. Hafeez, A., Rab, SM. and Rasheed, S. Human immunodeficiency virus associated disorders in Pakistan. AIDS Res. Hum.Retroviruscs, 1988;4: 149-54.
2. Mujeeb, S.A. and Hashmi, M.R.A. A study of HIV antibody in sera of blood donors at risk.). Pak.. Med. Assoc.. 1988:38:221-22.
3. Mujeeb. S.A. and Hafeez, A. Blood transfusion services, a potential source of AIDS spread in the country. Transfusion Today, ISBT, 1992; 14:10.
4. Mujeeb, S.A., Khanani, MR., Khursheed,T. and Akram, S. Prevalence of lily infect ion among blood donors.). Pak. Med. Assoc., 1991;4 1:253-54.
5. World Health Organisation. Workshop on organisation and management of blood transfusion services, 1989; WI lO.EM/lah/227-E.
6. Wahdan, M.H. Epidemiology of acquired immunodeficiency syndrome, 3rd ed. Geneva, WHO, 1991,p. 12.
7. World Health Organisation. Consensus statement on screening of blood donations for infectious agents transmissible through blood transfusion. Global blood safety initiative. Geneva, WHO, 1990, pp. 1-4.
8. World Health Organisation. Autologus transfusion in developing countries. Global blood safety initiative. Geneva, WHO. 1990, pp.1-7.