

HIV ANTIBODIES IN BEGGAR BLOOD DONORS IN RIO DE JANEIRO, BRAZIL

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Of the many hazards to health for people living in the developing world one which has been created by modern technology is the spread of disease through blood transfusion. There are two reasons why this is dangerous; one is that with a commercialized system, as is largely the situation for example in Brazil, the poorest section of the population is sometimes used as a source of blood. This is the natural consequence of offering either money or food in exchange for something that can apparently be easily spared; it also means that the people selling their blood are often desperate, without work or a source of income and likely to be in poor health. The other reason is that because of the high cost of testing donations for evidence of infectivity and then having to discard positives, blood is not infrequently transfused untested.

To investigate the extent of the problem a study has been done on one hundred beggars who make use of a church-funded medical clinic in a "red light" district of Rio de Janeiro. Seventy of these beggars were found to be regular blood donors.

Of the beggars, 87 were male and 13 female with average ages of 27.7 and 41.4 years respectively. Forty were white, 33 were black and 27 brown. Of the males, twelve were homosexuals, eight were bisexual, the rest heterosexual. Only 3, all males, were intravenous drug abusers.

All the beggars agreed to be bled and to be tested for evidence of various blood-transmissible infections, human immunodeficiency virus (HIV), hepatitis B, syphilis and Chagas' disease (*Trypanosoma cruzi*).

The results are shown in the Table.

Of the five people infected with HIV, all regularly donated blood. Two were homosexual, one was bisexual, two said to be heterosexual. None was an intravenous drug abuser.

The 21 persons with evidence of infection with hepatitis B were found equally in both blood donors and non-blood donors. Two of

those carrying HBsag were regular donors. One of the group with anti-HBsag was an intravenous drug abuser.

Evidence of syphilis was found in 13 (12.9%), 9 of them regular blood donors, and five donors were positive for *T. cruzi* antibodies.

The apparent higher rate of infection with HIV in those donating blood could reflect the predominance of males in this group, as the proportion of homosexuals was the same in both groups. However, this would not account for the difference in those found infected with hepatitis B or with Chagas' disease. A possibility which must be considered is that the blood donors may have acquired infection after being subjected to plasmaphoresis which has been shown to have caused under similar circumstances outbreaks of non-A, non-B hepatitis (Muss et al., 1985, *Infection*, 13 :57-60) and malaria (Martins et al., 1986, Abstracts of International Symposium on Malaria, Rio de Janeiro, Brazil).

If blood were being routinely screened and positives discarded, these results, although showing a high rate of infection, would not necessarily matter. When blood is being transfused untested into un-suspecting patients the picture is extremely alarming. A further feature is the possibility that under precarious conditions the donors themselves become infected, amplifying the whole problem.

The dual hazard of a commercialized blood transfusion system which buys blood from sick people and sells it for use un-tested is something which must be prevented whatever the high cost of controlling and testing all blood to ensure it is safe before it is transfused to another person.

It is unfortunate that unchecked private enterprise has been allowed to flourish in this lucrative field. With the extra danger now of spreading AIDS the evidence shown in this small sample demonstrates how important it is for Health Authorities to take comprehensive action without further delay.

+ Deceased.

Number of beggars with evidence of infection

	HIV	Hepatitis B		Syphilis	Chagas
		HBsag	anti-HBsag		
Blood donors (70)	5 (7%)	2 (2.8%)	14 (20%)	9 (12.9%)	5 (7%)
Non-blood donors (30)	0	1 (3.3%)	4 (13.3%)	4 (13.3%)	0