AIDS, A SOCIAL DILEMMA: DETECTION OF SEROPOSITIVES

P. ENEL*, C. MANUEL*, J. CHARREL*, M.P. LARHER*,
D. REVIRON** and J.L. SAN MARCO

* Public Health Departement – FACULTE DE MEDECINE, 27, Bd Jean Moulin 13385 MARSEILLE Cedex 5 – FRANCE.
** Blood Transfusion Center, CTS, Bd Baille, 13005 Marseille, FRANCE.

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At present, we can observe an evolution in ideas about the detection of HIV seropositivity through a qualitative analysis of specialised literature on the ethical aspects of AIDS. In the case of this disease, systematic screening of the population does not correspond to epidemiological criteria: it is wasteful, troublesome and costly. Whether it is voluntary, and therefore biased, or compulsory, and therefore controversial, systematic screening seems an unlikely option.

This situation has prompted many versions of target-group screening, which correspond to two options:
- systematic screening of known risk-groups, discriminatory, confidential and anonymous;
- target-group screening linked to particular circumstances: recognised as necessary by blood-donors and well-accepted by pregnant mothers. This method can be institutionalised and applied in the armed forces and in prisons,...

Lastly, we consider measures taken by different countries and organisations.

INTRODUCTION

At present one can observe an evolution in the ideas of the general public and of scientific circles concerning detection of HIV seropositivity. The practice of offering testing for the HIV antibody on a voluntary, anonymous and individual basis is sometimes giving way to the use of coercive ideas and measures, despite the wise recommendations of various organisations (8, 26, 46, 108). The appearance and rapid developments of AIDS raise for all nations a whole series of medical, political, economic and ethical issues, as we saw at the Sixth International Conference on AIDS in San Francisco in June 1990. From the ethical point of view, the problem raised by any epidemic is the conflict between the right of the society to protect itself and the right of individuals to live freely and equally (13, 83, 92). In the case of AIDS, the problem is complicated by an “unpleasant” context linked to the usual modes of transmission of the disease: notions of morality, punishment, puritanism and discrimination (76, 95).

METHODS

Based on a bibliographical analysis of specialised literature on the ethical aspects of AIDS, our research was concentrated on the more specific theme of screening, which was of particular interest to us as public health doctors. Our team used four data-banks, Medline, Pascal, Bioethics and AIDS and conducted research through some general, non-medical reviews of the subject. The main key-words selected, in association with AIDS, were: ethics, human rights and legislation. The methodology is described in detail in
our general article: "The ethical approach to AIDS. A bibliographical review" (66). We analysed all the 380 selected articles, then classified them according to main themes, including detection of seropositive subjects.

Our indispensable companion was the "Tabular information on legal instruments dealing with AIDS and HIV infection" published by the World Health Organisation in May 1990.

We will describe the various modes of screening described in the literature. In a general way, we will distinguish between general screening of the whole population and screening restricted to certain groups.

**GENERAL SCREENING**

At present, serological tests are fairly varied and adapted to different kinds of situations: large-scale screening in blood-banks, clinical research. They are used to give new and accurate information about the disease: mode of transmission of the virus, progression of the world-wide epidemic, evaluation of preventive measures (49, 69, 91).

The tests to detect the presence of anti-HIV antibodies (viral anti-protein anti-bodies) are of the ELISA type (enzyme linked immuno-sorbent assay, or immuno-enzymatic tests in the solid phase). These are easy and quick to carry out, and are, therefore, widely used for the serological diagnosis of HIV infection and for screening in blood-banks. The techniques vary in a number of ways, but all maintain certain stable qualities (32).

The polemic raised about systematic screening of the whole population with an ELISA-type test are considered by many scientists to be unfounded. Screening of any kind must correspond to very specific criteria defined by the epidemiologist. The choice of a screening program must be made according to three criteria: the method (which is not called seriously into question here), the disease itself and the target-population. It is mainly these last two criteria which are not met by systematic screening. The prohibitive cost of large-scale testing, the misapprehension of the real benefit to be gained for the individual and for society, the non-availability of programs permitting the control and evaluation of such a campaign, are also aspects which should be taken into account (28, 56, 99).

The method of detection of antibodies in the blood must correspond to two known properties, which are sensitivity and specificity. These criteria are fairly well respected by screening for anti-HIV antibodies.

Sensitivity, or the capacity of a test to identify infection, is the primordial quality of a screening-test. In the present case, sensitivity is close to 99%. Insufficient sensitivity, leading to the non-identification of persons infected by HIV, is unacceptable because of the risk involved in transfusing potentially dangerous blood, and because individuals mistakenly declared healthy could contaminate their sexual partners.

The second quality of a screening test is its specificity, i.e. its capacity to identify non-contaminated individuals. The ELISA-type tests presently available are accurate to between 99 and 99.9%. This may seem acceptable, but it means that one case in 100 or 1000 is a "false positive". All positive results must therefore be carefully confirmed. It is quite out of the question to conclude rapidly that these false positives, people who are in fact perfectly healthy, are infected by HIV, since they would thus suffer intolerable social and psychological prejudice (54, 70).

No vaccine or preclinical curing treatment is yet available, and so the risks of systematic screening are probably higher than the individual benefits to be expected, from the point of view of the epidemiologist. A strict systematic control does not necessarily imply a reduction in the incidence of the disease. Moreover, the low incidence of the disease in the general population implies the low level of usefulness of general screening. It would be inefficient, increasing the number of false positives and falsely reassuring some individuals (false negatives, late positive reactions, time lag between two tests) (18, 75, 80, 84, 96, 107).

Nevertheless, some studies of prevalence have been realised, and they are useful for scientific knowledge. Ethical aspects are treated appropriately, as in the SEROCO cohort study (24).

**VOLUNTARY OR COMPULSORY?**

If general screening were voluntary (the free choice of the individual, whether or not advised by his doctor, to submit to the test), it would, in fact, be non-systematic and therefore biased: it would thus lose some of its interest as well from the point of view of epidemiological research. General screening is of value only if the whole population is treated in an active and systematic way. Its value is limited if people have recourse to it on their own initiative, whether spontaneously or for specific motives (41, 54, 64, 71).

If screening were compulsory for all people, and this is the most controversial version, then enormous ethical problems would be raised (57, 74). If we refer to past experience, compulsory measures which proved efficient in certain epidemics (smallpox, poliomyelitis, etc...) were treatment or vaccination programs. And it should also be remembered that search for contacts in the case of syphilis proved unsuccessful, as shown by the W.H.O. (16, 85). As in the case of venereal diseases, which are similar to AIDS (only difference being, at present, the absence of any curing treatment for AIDS), voluntary and anonymous screening is a necessity (7, 12, 55), because of the psychological and socio-medical consequences of a seropositive test (in certain countries access to health insurance is rendered difficult or even prohibited) (40, 45). Compulsory testing should obviously correspond to compulsory