AIMS For a better birth...

HIV Testing and AIDS

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Universal testing for all women? Beverley Beech believes the cost, at every level, may be too high.

Human Immunodeficiency Virus (HIV) has been a cause of controversy since it was first identified, and the argument continues whether or not HIV develops into AIDS (Acquired Immune Deficiency Syndrome). Potentially, all men and women are at risk from the AIDS virus and the majority of women have acquired it through bisexual partners, drug use or, as in the case of haemophiliacs, blood products.

Since 1994 the Government has been promoting a screening programme for all pregnant women in areas where HIV infection is high and offering screening to those who are perceived to be at increased risk.

In 1999 the Government proposed a new strategy:

- · By the 31st December 2000 - all pregnant women will be offered an HIV test antenatally and Trusts will have a target of achieving a minimum of 50% uptake (and in those areas that have already achieved that a further 15%)
- · By 31st December 2002 - a 90% uptake, so that 80% of HIV infected women are identified.

Since 1979, 1628 babies have been born to HIV seropositive mothers in the UK. An anonymous screening programme in 1997 found 265 babies born to HIV infected women: 195 in London, 14 in Scotland and 56 elsewhere. Of the approximately 200 births to test positive women in London in 1998, 23 babies (around 18%) were themselves found to test positive.

The following year, 10.5% (31/297) babies born to test-positive women tested positive, 40% (118) tested negative and 49.5% (148) are currently indeterminate (aged less than 18 months when last tested and with no other evidence of HIV infection). In London, most evidence of mother to baby transmission involves black African women where maternal infection is thought to have been acquired abroad (95%). Most of Scotland's reports associate test positive status with injecting drug use[1]

On the face of it universal testing may appear laudable. However. HIV infections present a number of problems. Dr Phillip Mortimer. Head of the UK's Central Public Health Laboratory Service Retrovirus Division notes that "Diagnosis of HIV infection is based almost entirely on detection of antibodies to HIV, but there can be misleading cross reactions between HIV-1 antigens and antibodies formed against other antigens, and these may lead to false- positive reactions. Thus it may be impossible to relate an antibody response specifically to HIV-l infection". [2]

An American article, questioning the accuracy of HIV tests, listed 63 factors known to cause false-

positive HIV antibody test results. They include: Herpes simplex, pregnancy in multiparous women, tetanus vaccination, cold or flu! [3] (see table below).

It has been estimated that outside London there will be approximately 1 in 6.000 women who will have a true positive test. In an area of low incidence with 3.500 births a year it has been calculated that there will be I true positive every three years and between 3 and 11 false positives each year![4]

In my area in Buckinghamshire there has been only one case of HIV infection detected. But the Trust has rushed to implement these screening programmes. When I raised the question of the counselling skills of the midwives I was informed that they have been signed up for a day's course! I wondered at the costs of implementing this programme and also at the risks of misdiagnosis.

While the Government is concentrating on testing a captive group of pregnant women it is not focusing on other issues. One of the most effective ways of preventing HIV transmission is the use of barrier methods of contraception, or addressing sexually violent behaviours, something that some heterosexual men are reluctant to do.

Having detected an HIV positive mother the pressure is then on for her to accept treatment for her baby. Last year a couple made headlines in the national newspapers when they refused to have their baby tested for HIV and refused to give up breast feeding, or accept AZT treatment. The mother had had HIV for ten years and chose to have a natural birth without interventions (the potential adverse effects of fetal scalp electrodes or episiotomy have not been researched) and the research concerning breastfeeding is contradictory.

The couple argued that the mother's HIV status was under control, they were not willing to agree to the baby having AZT as research has shown that this drug is highly toxic to human cells at the dosage recommended by the manufacturer. The High Court ordered that the baby should be tested. The family went into hiding, and no doubt intend staying there until breastfeeding has finished.

So far, the baby has shown no signs of infection and research shows that she has an 80-85% chance of staying that way. Had the mother had an elective caesarean section, antiretroviral therapy and avoided breastfeeding the baby's chance of staying free of the virus would be 90-95%. Parents are, therefore, faced with the dilemma of risking the long-term (unknown) effects of AZT for a 10% increased risk of the baby developing HIV.

The Government's advice stresses that the midwives should recommend HIV testing. In which case, how can they be offering informed choice and what about the ethics of counselling? Particularly, when the information leaflet does not give the woman any information about how to assess her own risk status and weigh up the pros and cons of her situation. Suggesting that most pregnant women who have HIV do not know is hardly an exercise in providing balanced information.

Furthermore, if the mother agrees to testing, finds that she is HIV positive and decides not to accept the current advice to have caesarean section and then bottle feed, she can hardly have much confidence that

her decision will be respected when the High Court supported Camden Social Workers application to force a mother to comply. The whole point about making an informed decision is that the parent's decision should then be respected and supported.

An HIV positive diagnosis has enormous social as well as health implications. It does not take Einstein to consider the implications of a misdiagnosis and the subsequent emotional trauma for the family. While midwives have to wrestle with the difficulties of skilled counselling the mother has to weigh up the risks to her and her baby and the present initiatives appear to pay lip service to the principle of informed consent.

It is argued that by making HIV testing a normal part of antenatal care it will reduce the stigma attached to the infection. However, why choose HIV testing? Hepatitis B is a far more dangerous infection and far more prevalent than HIV, but it does not carry a social stigma, and there appear to be no efforts in place to test everyone for that infection.

HIV Antibody Tests

For years, a diagnosis of AIDS has relied on HIV antibody tests (ELISA, IFA and Western blot). Two people with identical symptoms go to a doctor. One test HIV negative and recieves a diagnosis of tuberculosis. The other tests HIV positive and is told that (s)he has AIDS. A tremendous amount of weight is given to the results of these antibody tests, which the AIDS establishment says are "99.5% accurate". But, these tests are not that accurate. A startling array of factors can cause false-positive HIV antibody test results, including recent exposure to a viral infection of viral vaccines (flu, hepatitis B vaccines), autoimmune disease (lupus, scleroderma, rheumatoid arthritis), alcoholic hepatitis or liver disease, pregnancy in multiparous women, multiple blood transfusions, and the presence of a variety of antibodies.

There are a number of conditions that cause positve Western blot and/or ELISA test results. Positive test results depend upon what antibodies a person carries and what antigens a particular kit contains. For instance some, but not all people who have had blood transfusions, prior pregnancies, or an organ transplant will make HLA antiboides. And some, but not all. test kits (both ELISA and Western blot) will be contaminated with HLA antigens to which these antibodies can react. Only if these two conditions coincide might you get a false-positive due to HLA cross-reactivity.

All AIDS-risk groups, including Africans, have one commonality that the general US or Western European population do not share: an exposure to numerous foreign antigens and proteins. Exposure to foreign antigens, proteins, and infectious agents causes the body to make antibodies. The more different, cross-reacting antibodies that a person has in his / her system, the more likely a positive HIV test result.

The following is a summary of the factors known to cause false-positive HIV antibody test results. Space does not permit us to reproduce the numerous reference for this list. However they are available on request to: The Editor, AIMS Journal *(address removed as no longer current)*

Acute Viral Infections, DNA viral infections	Blood transfusions, multiple blood transfusions
Administration of human immunoglobulin preparations pooled before 1985	Epstein-Barr virus
Alcoholic hepatitis, alcoholic liver disease	False positives on other tests, including RPR (rapid plasma reagent)
Alpha Interferon therapy in hemodialysis patients	Flu
Antibodies with a high affinity for polystyrene used in the test kits	Flu vaccination
Anti-carbohydrate antibodies	Globulins produced during polyclonal gammopathies (which are seen in Aids risk groups)
Anti-collagen antibodies (found in gay men, haemophiliacs, Africans of both sexes and people with leprosy	Haematologic malignant disorders/lymphoma
Anti-Hbc IgM	Haemolyzed serum (blood where haemoglobin is separated from the red cells)
Anti-hepatitis A IgM (antibody)	Haemophilia
Anti-lymphocite antibodies	Healthy individuals as a result of poorly-understood cross-reactions
Anti-microsomal antibodies	Heat-treated specimens
Anti-mitochondrial antibodies	Haemodialysis/renal failure
Anti-nuclear antibodies	Hepatitis
Anti-parietal cell antibody	Hepatitis B vaccination
Anti-smooth muscle antibodys	Herpes Simplex I and II
Autoimmune diseases (Systemic Lupus Erythemetosus, Scleroderma,connective tissue disease, dermatomyositis)	High levels of ciruculating immune complexes
Hyperbilirubinemia	HLA antibodies (to Class I and II leukocyte antigens)
Hypergammaglobulinemia (high levels of antibodies)	Proteins on the filter paper
Leprosy	Q-fever with associated hepatitis
Lipemic serum (blood with high levels of fat or lipids)	Recent viral infection or exposure to viral vaccines
Malaria	Receptive anal sex
Malignant neoplasms (cancers)	Renal (kidney) failure

Multiple myeloma	Renal transplantation
Mycobacterium avium	Rheumatoid arthritis
Naturally-occurring antibodies	Serum-positive for rhematoid factor, anti-nuclear antibody (both found in rheumatoid arthritis and other autoantibodies
Normal human ribonucleoproteins	Stevens-Johnson syndrome
Organ transplantation	"Sticky" blood (in Africans)
Other retroviruses	Systemic Lupus Erythemetosus
Passive immunization: receipt of gamma globulin or immune globulin (as prophylaxis against infection which contains antibodies)	T-cell leukocyte antigen antibodies
Pregnancy in multiparous women	Tetanus vaccination
Primary biliary cirrhosis	Tuberculosis
Primary sclerosing cholangitis	Upper Respiratory Tract Infection
	Visceral leishmaniasis

* * *This list was compiled by Christine Johnson a representative of the HIV/AIDS Group HEAL, based in Los Angeles. It was first published as, Johnson, C, Whose antibodies are they anyway?, Continuum, Sept/Oct 1996, and later published in the Townsend Letter for Doctors and Patients, December 1998: 26-7*

References

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