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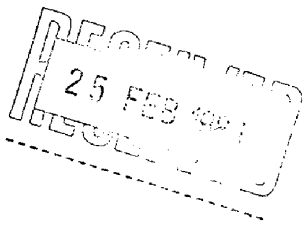


REPORT OF AIDS CONFERENCE

HELD IN NEWCASTLE-ON-TYNE, 11-13 FEBRUARY, 1986

P. FOSTER

FEBRUARY, 1986

INTRODUCTION

The meeting was very broadly based with a wide range of interests represented (eg social worksers, nurses, doctors, representatives of gay and drug user communities etc) and the presentations were aimed at providing useful information to this rather broad spectrum of people. Presentations were also aimed at the media who were present in strength.

As a consequence information of value to those already working at the forefront of their subject was rather limited. Various interesting points which did emerge are noted below. Information was also gained at the trade exhibition and this is appended.

The proceedings of the meeting are to be published in June.

1. Dr. P. Volberding (Introduction)

(i) Mortality:

Full AIDS 70-80% in 2 years
ARC <10% in 2 years

(ii) Incubation Period:

Gays : 12 - 18 months
Transfusion : average 2 - 3 years, range 2 - 57 + months

(iii) Rate of Spread:

San Fransisco gays 1978 no evidence of HTLVIII Ab
1984 50% Ab +ve
1985 estimate 10^6 gays Ab +ve

(iv) Incubation Period:

Time from infection - seroconversion usually 1 - 2 months
certainly <6 months for everyone.

(v) Risk of Disease for Ab +ve:

AIDS 4 - 19%
ARC 25%

+ lifelong risk of transmission to offspring.

2. R. Tedder (The Virus)

(i) Possibilities for a Vaccine.

The infectivity of the virus is not blocked by antibody. Antigenic sites on the virus envelope believed to be similar to HLA antigens (class 2 antigens) so vaccine targeted at envelope may not be feasible.

(ii) Infectious State.

Insertion of viral material occurs before antibody is produced so it may be possible to be infectious and Ab -ve (but Tedder thinks this is unlikely).

Tedder also said that he believed the small number of seroconversions following the use of HT FVIII were due to a long delay in the latent phase and not to the HT FVIII.

(iii) Forms of HTLVIII.

The gene which codes for the envelope proteins seems to be highly variable and this may explain why there are different forms of the virus (some patients are infected with more than one form simultaneously).

Two envelope proteins have been identified so far, one at 120 000 MW (highly glycosylated) and the other at 40 000 MW.

(iv) AIDS in Africa.

Tedder had just returned from Central Africa and said that his respect for the virus had increased by an order of magnitude.

The epidemiology in Central Africa seems to be very different to that in other areas. The seroconversion rate is now about 20% in the "Westernised" population (ie educated urban middle class with sexual behaviour similar to the west).

There is no evidence for an insect vector as HTLVIII antibody is absent from sections of the population who are not sexually active (ie children other than 2-3 years old who have acquired the infection by maternal transmission).

The reason for the very high rate of seroconversion is not known. There is no evidence to support the view that AIDS originated in Central Africa (samples from 1978/9 are Ab -ve) and differences must be due to either some different behaviour of the population or to a different form of virus which may be more easily spread (although the clinical outcome seems to be the same as in the West). This latter possibility led Tedder to hint at his concern about survival of the species.

3. P.M. Mortimer (The work of the Laboratories)

(i) False -ve Results.

Suggested these were due to poor handling of specimen/sample (eg heating of sample at 56 °C for 30 mins before testing).

(ii) Evaluation of Kits for HTLVIII Ab Test.

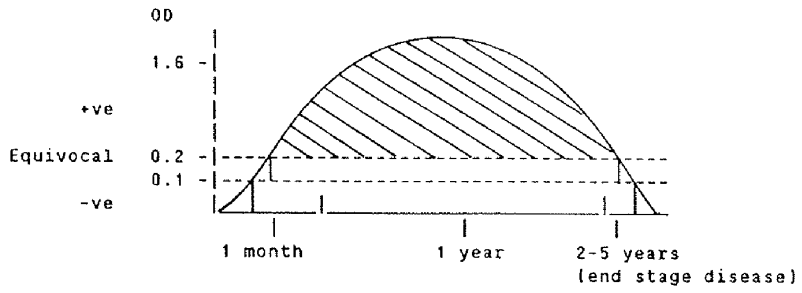
	Manufacturer	Titre (Quantitative)	Ranking (Qualitative)	Error %
1.	Abbot	18	4	0.6
2.	Ortho	18	6	
3.	Behringwerke	16	3	
4.	Wellcome	13	3	0.9
5.	Du Pont	14	3	0
6.	Pasteur	14	1	
7-9	Others	9-11	7-9	5.1-6.3

Tests 1-6 regarded as satisfactory, and 7-9 poor.

(iii) Behaviour of HTLVIII Ab Test Throughout the Course of the Disease.

Results from Western Blot assays suggested a pattern that corresponds to the clinical progression of the illness.

In an idealised form this may look like:-



(iv) Current UK Situation.

Group	Total No.	% Ab +ve	Trend
haemophiliacs	4 000	25	down
blood recipients	10^6	0.006	down
IV drug users	20 000	5	up
gays	500 000	3	up

This gives at a total of about 20 000 +ve individuals in the UK now.

(v) Blood Donor Screening has Shown 1/45000 +ve

Mortimer pointed out that with this level of infection £3M was being spent to detect only 50 +ve donors/year (he seemed to be implying that spending priorities were wrong).

4. H. Gunson (Blood Transfusion)

Reported on use of Wellcome & Organon kits within BTS.

(i) Manchester Study (Organon)

Found high proportion of equivocal results in initial test (mostly -ve on confirmatory test); also substantial batch to batch variation (ie range of false +ves from 0.04 to 0.57% across batches).

Equivocal results ranged from 0.04 to 0.19%.

(ii) BTS Data (October - December 1985)

Test		% +ve or Equivocal		
		Oct	Nov	Dec
Wellcome	First test	1.3	0.57	0.24
	Repeat test	0.14	0.12	0.10
Organon	First test	0.44	0.69	0.44
	Repeat test	0.10	0.16	0.06

	Number +ve		
	Oct	Nov	Dec
Confirmatory test	3	3	7

ie total of 13 Ab +ve from almost 600 000 tests (0.002%) 10 of these 13 donors are from high risk groups.

Comparible figures from USA from 10^6 screenings

	% +ve
on initial test	1
repeat test	0.17
confirmed	0.038

ie incidence for USA blood donors is almost 20 x greater than for UK donors. (Gunson believed this was due to the good response of UK donors to request not to donate if they are in a high risk group - this in turn thought to be due to the good relationship built up between BTS and donors over many years). Nobody questioned the sensitivity of the UK test.

5. P. Jones (Haemophilia)

(i) HTLVIII Status of UK Haemophiliacs.

Type	No. Tested	No. +ve	% +ve
haemophilia A	1268	752	59
haemophilia B	324	20	6
VW	215	11	5
all types	2025	896	44
Children			
< 5 years	40	5	12
5 - 9			35
10 - 14			68

From this data it is possible to estimate that 1200 UK haemophiliacs will have seroconverted.

(ii) HTLVIII Status Related to Treatment.

Product	% +ve
Cryoppt only	1
NHS concentrate only	10
Commercial concentrate only	45

(iii) Incidence of AIDS.

	USA	UK
Adults	124 (1%)	11 (4% of total no. AIDS cases)
Children	11 (5%)	0

N.E. England 143 haemophiliacs
3 AIDS cases already
2 more recently
(possibly 2 more also - this was not clear)

Latest cases have lymphomas rather than opportunistic infections (similarly 3 recent cases in USA with Karposi sarcoma) this seems to represent a change in the disease for haemophiliacs (perhaps a different strain of virus), incubation period said to average 29 months but can be as long as 4 years for infections from blood transfusion.

(iv) FVIII Usage.

In the USA the use of FVIII has returned to the pre-AIDS level. There are indications that this is also now happening in the UK.

(V) Safety of Heated Products.

Not yet possible to guarantee complete inactivation of AIDS virus.

There are 4 cases of seroconversion after treatment with heat treated FVIII.

USA (Levine)	1	probable
	2	possible
Netherlands (Breederveldt)	1	clear case (+ve after 1 year on HT material)

(Note: In the discussion following this presentation Tedder & Pinching independently said that they believed that the seroconversions were not due to HT FVIII but to earlier treatment with unheated products. Pinching cited cases of seroconversion from blood transfusion 12-15 months after exposure. This has occurred in only a very small number of cases with a co-factor or rare event triggering seroconversion in a previously exposed individual).

(vi) Risk to Hospital Staff.

Jones noted that 79 staff are dealing with haemophiliacs in Newcastle and all are seronegative for HTLVIII.