

# Did the cost of screening allow a virus to spread?

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**T**HE BLOOD Transfusion Service has begun mass screening for hepatitis C, a rare blood-borne virus which can cause chronic liver damage and, ultimately, death. Up to 12 sufferers plan to sue the Department of Health because, they believe, screening should have begun nearly two years ago, when a test was first available. They claim cost was a major factor in postponing the screening.

The Government has recently paid out £82 million to 1,200 haemophiliacs infected with HIV from contaminated supplies of Factor VIII. But it could win the proposed action if lawyers can prove that sometimes the health needs of the many outweigh those of the individual.

There are two or three cases of post-transfusion hepatitis annually. The obvious symptom is jaundice. Death can result and, 30 years ago, it was a major concern.

The virus was identified until 1965. It took another five years to create a crude laboratory test to identify some of the blood donations which carried the virus and another 15 to give transfusion laboratories the full battery of diagnostics to detect all stages of the disease's progress. Only then could all donations be confidently shown to be clear.

Even then, some post-transfusion hepatitis still occurred. Since it was not due to hepatitis B, nor to hepatitis A, which is not blood-borne, it was described as Non-A Non-B hepatitis (NANBH).

Transfusion specialists, anxious to determine the incidence of NANBH, examined the medical records of patients with liver disease, but found no obvious correlation — except the well known link with heavy drinking. It took another decade before the nature of NANBH was discovered, after a Californian biotechnology company, Chiron, finally devised a new kind of test.

Dr Marcela Contreras, director of the North London Blood Transfusion Service (BTS), and Dr John Barbara, a microbiologist, used the test and found that in 400 blood samples, only two showed raised liver enzyme activities consistent with NANBH. And just one was associated with exposure to the virus now called hepatitis C — a prevalence of 0.25 per cent. But the new test was prone to cross-reactivity with other antibod-

ies, a problem also encountered with the early Aids tests, which had caused hundreds to be falsely diagnosed as HIV-positive.

With such low hepatitis C prevalence, the number of false positives was also likely to be high. Also, given that there was little evidence hepatitis C caused much disease, was the exercise worthwhile?

Screening for the Aids virus costs 50p to 60p per test; screening for hepatitis C costs £2, but the confirmatory test costs £21, and this is used five times more frequently than that for HIV. Not accounting for the extra staff require-

ments, for 2.5 million blood donations a year the estimated total cost to the NHS was more than £10 million. There is also a delay, which could theoretically cost lives, in making acceptable blood available.

The first-generation hepatitis C test was a brilliant piece of scientific detective work, but a mass screening failure which gave results of dubious value.

Much of the hepatitis C story still needs to be told. In the process of analysing this complex virus, a second-generation test that is more specific has been created which the BTS will use for mass screening.

Will the exercise now be worthwhile? "In 1970 we were seeing 30 cases a year of post-transfusion hepatitis-B infection with several fatalities — that really was an obvious problem," Dr Barbara said.

Nevertheless, other Western countries have adopted mass screening for hepatitis C, and this could leave the BTS open to criticism. An estimated 1,500 people were infected during the period that BTS did not screen for hepatitis C while a test was available. Many will never come to light. The disease may lie silent for 20 years or more, but it cannot be treated lightly.

Dr John Du Sheiko, reader in medicine at the Royal Free Hospital in London, says he has found the virus in the saliva of victims. "Whether it can be transmitted through kissing, we don't know," he said, "but we must eliminate it from blood."

From the laboratory scientist's point of view, the BTS decision to wait for a reliable hepatitis C test can be seen as rational, but lawyers and a judge and jury might take more convincing.

## VIROLOGY

Gerry Woolf



Hepatitis C virus with single-stranded RNA