

High disease rate in US transfusions

By ANTHONY TUCKER, our Science Correspondent

Twelve out of 100 patients receiving whole human blood plasma during treatment in California developed acute hepatitis within six months.

This startling revelation of poor pooling and handling techniques in the American transfusion service is revealed in a research paper published in the current issue of the medical journal "Transfusion." In the same issue of the journal is a strong recommendation by an expert committee of the National Research Council of the United States National Academy of Sciences saying that "the use of whole blood plasma should be discouraged and even discontinued."

Acute hepatitis is a viral infection of the liver which reveals itself primarily as jaundice, and it was found during the Second World War that the virus could be transmitted through donated blood from those who had suffered from the disease at some time in the past.

Tradition

The American blood transfusion service, which is commercially operated, operates a two-part sterilisation technique consisting of six months' storage followed by ultra-violet irradiation designed to inactivate virus particles. This enables the service to deal with large "pools" or batches of plasma made up from the blood of several hundred donors, a practice which simplifies handling procedures.

The Californian report is based on a three-year study and conclusively confirms the findings in this country that the ultra-violet technique is valueless as a protection against viral infections.

Although the present trend is toward the use of specific fractions of blood plasma for particular purposes, whole plasma is still used widely in all countries. In Britain, there have been no cases of plasma-induced hepatitis reported during the last decade, a record which rests entirely on the careful handling techniques employed here.

Serious concern

These include a careful screening of donors for hepatitis and the use of extremely small "pools," thus limiting the possibility of infection. No attempt is made to use ultra-violet sterilisation, and the director of the National Blood Transfusion Service, Dr T. E. Cleghorn, said on Saturday he "would be very seriously concerned if there was one case in a thousand" of hepatitis transmission through blood plasma in Britain.

Since the US authorities have for many years been aware of this risk, it is hard to understand why the service has been allowed to develop on the basis of large "pools." But the report recommendation may well be only the public lever of a national attempt to re-shape the service against strong economic opposition.

At a superficial level, safe blood plasma costs more to produce and, consequently, costs more per treatment.