9/8/20

Public Health Laboratory Service

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25th March, 1992

Our ref Your ref
JC/PH

Sir Joseph Smith,
Public Health Laboratory Service Board,
61, Colindale Avenue,
London NW9 5DF

Dear Sir Joseph,

REFERENCE SERVICES FOR HEPATITIS C CONFIRMATORY TESTING

The enclosed letter from Ken Mutton prompts me to write to you to ask you if any decision has been made regarding how reference services in virology can be organised to provide sufficient expertise in the Reference Laboratory, and also to give an efficient service over the whole country. As you see from the enclosed letter, there is pressure for each laboratory to do its own confirmatory testing purely on the basis that all they need is the necessary finance to purchase reagents.

Philip Mortimer, Richard Tedder and myself are at present in the middle of a complicated evaluation of the first two months of donor screening for hepatitis C antibody carried out in the Transfusion Service. The results suggest that, while over 80% of the patients with hepatitis C viraemia can be identified relatively easily using availa ble reagents, every test we have so far looked at misses some cases. The reasons for this are complex, but what is certain is that we need to be sure of the scientific basis of any testing system we recokmend, particularly as this arises from the unique nature of the reagents developed for hepatitis C. As you know, these are proteins made by recombinant technology and selected on the basis that they react in enzyme immunoassays with selected panels of sera tested by the manufacturers. The failure of different assays to identify all viraemic blood donors is probably partly due to different criteria of selection by different manufacturers or the different antigens used. What is certain is that unless we had the expertise acquired from analysing the results of approximately five hundred donor sera referred for confirmatory testing in the first two months of the hepatitis C donor screening, we would not be aware of the problems which we are now facing. Part of the problem is undoubtedly due to antigenic variants of hepatitis C virus. From molecular biology studies it is likely that variation occurs in hepatitis C carriers over time, and that strains vary in difference parts of the world.

Another factor is that we do not know the tertiary configuration of the way proteins are arranged in the virus particle and, therefore, we are not looking at the total array of antigens likely to be significant in the immune response. For this reason, it is obvious that a research and development programme is necessary to look at molecular variants of this virus and its significance with regard to:- 1) immune responses and 2) epidemiological

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factors which might affect different variants. For instance, one of the possibilities is that the antigenic change in the virus over time might change the antibody profile of a patients immune response.

I am proposing to hold a meeting of the Hepatitis Subcommittee sometime in May, and I think we will need to produce more detailed recommendations with regard to hepatitis C testing. I know that you have been reviewing the question of reference facilities with Philip Mortimer, and I would welcome an opportunity to discuss the implications of any policy decision and the results of the blood donor screening prior to producing recommendations for use in the PHLS for hepatitis C screening.

Kind regards,

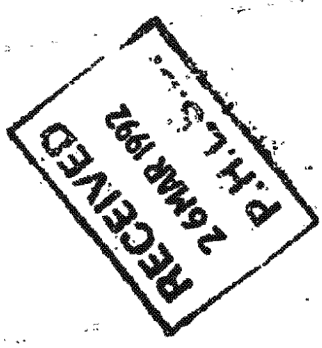
Yours sincerely,

GRO-C

J. Craske
Consultant Virologist

GRO-C

cc Philip Mortimer VRL CPHL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