

**THE ROYAL VICTORIA INFIRMARY**

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The Factor VIII Concentrates and Hepatitis

At a meeting earlier this year I indicated that there was an association between the incidence of hepatitis and the use of commercial factor VIII concentrates. I am writing to tell you that this association has now been proved and that the virus has been identified in two of the batches of commercial concentrate tested at the Middlesex Hospital. Dr Craske of Bournemouth has collected 45 cases of jaundice presumed to be due to commercial concentrate contamination.

In Newcastle we have now had 16 cases of jaundice in the past 18 months. Fifteen of these had received commercial concentrate and 10 had been on home therapy. Seven cases had been HAA positive (4 on home therapy). We also have one case of carrier status persistent HAA positive who has never received concentrate.

Of the 7 patients who have become HAA positive 3 have reverted to the negative state shortly after their illness, 2 are due for retesting and 2 have been notified within the past month.

All these patients are severely affected haemophiliacs and all have been multi-transfused in the past. There have been no reports of jaundice in staff or in the relatives of the patients affected. The disease in our patients has been mild and only one boy has had to be admitted to hospital for a week. Although Hemofil is the product connected with the United Kingdom outbreak it is quite obvious that all concentrate carries the risk, and that we can expect this risk to continue even when a U K product becomes generally available. The manufacturers of commercial concentrate have instituted very careful programmes of testing individual donors (from whom plasma is collected by plasmaphoresis) as well as the finished batches of material. As between 1,000 and 6,000 litres of material are fractionated at the same time it is hardly surprising that the occasional virus gets through, and that it is not picked up on routine testing because of the dilution factor.

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Last week I attended a conference arranged by Travenol Laboratories Ltd the manufacturers of Hemofil in London. Taking part in the discussion were Dr Cleghorn, the Director of the Blood Transfusion Service at the Edgware General Hospital, and Dr Dane, Virologist at the Middlesex Hospital as well as Dr Craske and the Medical Director of Travenol USA. It was generally agreed that the advantages (and indeed the necessity) of concentrate outweighed the risk of hepatitis, particularly in severely affected multi-transfused haemophiliacs.

As a result of the meeting the following recommendations are being made in order to limit as far as possible the incidence of hepatitis:

- 1 USE OF FACTOR VIII CONCENTRATE SHOULD BE CONFINED TO SEVERELY AFFECTED HAEMOPHILIACS, AND PREFERABLY TO THOSE HAEMOPHILIACS WHO HAVE A HISTORY OF FREQUENT TRANSFUSION.
- 2 YOUNG CHILDREN AND MILDLY AFFECTED HAEMOPHILIACS SHOULD ALWAYS RECEIVE CRYOPRECIPITATE IN PREFERENCE TO CONCENTRATE, UNLESS THERE IS AN OVER-RIDING CLINICAL REASON FOR USING CONCENTRATE. (i.e., in the event of a severe bleed when Cryoprecipitate is not available, or for the treatment of factor VIII antibodies or when home therapy is strongly indicated.)
- 3 THAT DRS CLEGHORN AND DANE SHOULD EXPLORE THE POSSIBILITY OF PREPARING IMMUNE PLASMA FOR USE IN A PASSIVE IMMUNOLOGICAL PROTECTION PROGRAMME BY IV INJECTION TO HAEMOPHILIACS WHO ARE LIKELY TO RECEIVE CONCENTRATE.



It is hoped that this programme can be got underway very quickly and we have already requested a supply of plasma for our severely affected patients.

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In view of this complication could I ask everyone who uses commercial concentrate to make sure that we receive full details (patient, reason for use and most important batch numbers) every time a factor VIII concentrate is used in the Region. We would also obviously like notification of any cases of jaundice. The patients on the home therapy programme, and all patients attending for follow up in Newcastle are having routine liver function tests and Australia antigen status determined already. The report of the Bournemouth outbreak by Dr Craske has been accepted for publication in the BMJ and should be published in the near future.

Peter Jones

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