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PROVISION OF PLASMA FOR AHG CONCENTRATE

At the first meeting of the recently formed Steering Committee on Blood Products Production to coordinate the activities of BPLs Elstree and Edinburgh, the recommendations accepted by an ad hoc Expert Committee convened by DHSS on the 20 March were considered. The recommendations of the Expert Committee are:-

1. that the number of donations devoted to the treatment of haemophilia in UK should be not less than 400,000 annually.

2. that 275,000 of these should be fractionated to prepare AHG concentrate.

It appeared that Scotland was already devoting about 50,000 donations annually to haemophilia and, therefore, was probably meeting the recommendations made by the Expert Committee. The approximate number of donations devoted to treating haemophilia in England and Wales in 1972 was 250,000, of which about 45,000 were used to prepare concentrate. There is thus an overall deficiency of about 100,000 (400,000 less 300,000). Therefore the number of donations still to be devoted to haemophilia in England and Wales, in order to reach the U.K. target of at least 400,000 is about 100,000.

It was subsequently agreed at a separate meeting by the representatives of England and Wales on the Steering Committee (Dr Darnborough, Mr Vallet, Dr Waiter, Mr Walters and Dr Maycock) that plasma, equivalent to that from the additional 100,000 donations required, could probably be obtained by increasing the number of concentrated red cells used by hospitals so that no, or only very little, extra blood would have to be collected.

The total number of donations to be diverted to the preparation of AHG concentrate at BPL Elstree would be about 5,000 per week, or about 250,000 per year. It is assumed that 5 donations yield 1.0L plasma. BPL Elstree would thus be able to fractionate 1000L plasma per week. In order to provide the total amount of plasma required for the preparation of AHG concentrate a considerable proportion of plasma at present used for cryoprecipitate would have to be diverted to BPL for the preparation of concentrate.

In discussion the following points emerged:-

1) <u>Blood collection.</u> All regions would have to adopt plastic blood bags. Mr Walters undertook to find out whether Messrs Baxter and Messrs Tuta could between them supply up to 1.5M blood bags annually and the cost involved.

2) <u>Staff.</u> Additional staff would probably be required. At RTC Cambridge it appeared that two laboratory assistants, one technician and one driver would be needed assuming the extra load would be distributed among transfusion centres in proportion to regional population.

3) <u>Technique.</u> There should be general uniformity in RTCs regarding the details of collection, separation and storage of plasma, as certain variations affect yield adversely.

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4) Equipment. Extra centrifuges and freezers for 5.0L bags might be required, e.g. RTC Cambridge would require three 6L Mistral centrifuges. The plasma, separated and frozen within 18 hours of collection, would be sent to BPL Elstree in 5.0L bags. It would be impossible to thaw and pool plasma from single donations without causing loss of activity and allowing the operation to be carried out in a manageable time.

5) Transport and Frozen Plasma. It was agreed that the provision of refrigerated vehicles ($-30^{\circ}C$) should be investigated and that these vehicles could make collection runs, e.g. Liverpool, Manchester, Birmingham and BPL.

6) Freezing Facilities. Centres might require additional frozen storage at $-30^{\circ}C$.

7) Concentrated Red Cells. It was agreed that local persuasion and education, e.g. holding of seminars, would probably be needed in order to increase the use of concentrated red cells. In Glasgow, where 40% of blood is used as concentrated red cells, seminars had been arranged and visits to various consultants had been made with good effect.

8) Space. Some RTCs might not be able to accommodate the additional centrifuges etc. that would be required for the project.

9) Finance. Additional revenue and capital expenditure would be necessary.

10) Distribution of additional load. It was agreed that this should be calculated in the first instance in proportion to regional populations. See Appendix 1.

11) Plasmapheresis. It was thought that the use of plasmapheresis would be difficult to justify in these circumstances because of the risks to which the donor is inevitably exposed.

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