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BLOOD TRANSFUSION SERVICE

(EDINBURGH AND SOUTH-EAST SCOTLAND REGION)

TELEPHONES: {LABORATORY FOUNTAINBRIDGE GRO-C
{REGIONAL DIRECTOR FOUNTAIN

ROYAL INFIRMARY
EDINBURGH 3

28th June, 1957.

Dr. R.M. Gordon,
Department of Health for Scotland,
St. Andrew's House,
EDINBURGH.

Dear Dr. Gordon,

Albumin

When we started plasma fractionation the policy agreed upon was the production of fractions for which there was a definite clinical demand, and it was considered then that the demand for albumin for specific treatment was so limited, that the cost of its production was unjustified.

There is no certain indication regarding the requirements of albumin for specific therapy. In the past few years I have had not more than five enquiries for albumin, and it appears that only on one occasion has the clinician concerned followed up the suggestion that the material might be obtainable from the Lister Institute.

If the Association now wish to reconsider their policy regarding plasma fractionation, it would be unwise to delay action until October - It will take at least 6 months to readjust the work schedule to prepare even limited amounts of albumin for clinical uses, apart from obtaining and training staff. The fractionation unit is working on minimum staff, largely because recent additions have had to be repeatedly diverted to handle the steadily increasing amount of routine work, In addition it is hoped that the work on extending the centre will not be much longer delayed, and it is important to take any change in production methods into account in preparing the detailed internal plans. Information should therefore be obtained at an early date from clinical departments - probably best through Regional Consultants and Specialists committees - regarding the clinical use of albumin, and the probably requirements for Scotland. Without /

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Without this information I doubt if much progress can be made at a Regional Directors Meeting. I feel it would be quicker to obtain the information first and then invite representatives of the Central Committee to present their views.

The production of albumin is but one facet of the whole problem of plasma processing which may be summarised as follows:-

1. Complete Fractionation:- This involves abandoning the use of plasma, except for specific purposes - such as clotting defects - and substituting albumin for routine replacement therapy. This would be exceedingly costly, and eventually result in accumulating stocks of other fractions such as gamma globulin and fibrinogen grossly in excess of requirements. I disagree with Dr. Maycock's suggestion that it is wasteful not to produce all the fractions. It is much more wasteful to discard the material after incurring the cost of manufacture.
The main advantage of substituting albumin for plasma is the fact that it is virus free, is convenient to handle and is stable. It has obvious clinical deficiencies (based on its composition) as compared with plasma.

2. Partial Fractionation:-
   a) By making albumin from all the supernatant from the gamma globulin fraction, the surplus over specific requirements being used as a plasma substitute.

   b) By making albumin only to meet estimated clinical needs - that is from only a part of the gamma globulin supernatant.
   In order to produce albumin from all the plasma fractionated, the work involved in each fractionation "run" would be doubled, and the yield of albumin would be about 30 litres annually.
   The production of albumin from only a part of the plasma fractionated. [2(b)] would be dependent on the information received from clinical departments. Judging by the requests made to date, it appears that not more than 2 or 3 patients per annum in Scotland require specific therapy, although the demand would probably be greater once it became known that albumin was available.
   One patient's requirements might be in the region of one litre depending on the condition, but it seems that about five litres might be a reasonable estimate, at least initially, for annual production.
   Additional staff requirements would be in proportion to the increase in work.

3. Although it is not directly related to the present issue, the question of future developments in the use of plasma cannot be overlooked, as as they may well influence future plans.
   Work /

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Work is already in progress here to produce a stable virus free liquid plasma, and a similar product has been processed in Switzerland and is under consideration in the United States. Although the cost of production by the methods already published is relatively high compared with the method we have in mind, it is still said to be lower than for dried plasma.
It is beyond doubt that a virus free stable liquid plasma would supersede the use of the present dried plasma except for specific purposes, for which limited amounts of fresh plasma would be required.

This eventuality is more than a possibility and must be taken into account in planning the building extension in relation both to the use of fractions and plasma.

Yours sincerely,

GRO-C

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