EDINBURGH AND SOUTH-EAST SCOTLAND REGIONAL BLOOD TRANSFUSION SERVICE

Irene - attach letter reply please — attached

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PROTEIN FRACTIONATION CENTRE
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Return to | Action taken
Jon Watt. | file.
Tor Foster. |

Dr J D Cash
National Medical Director
S N B T S
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EDINBURGH

Dear John

Freeze-Dried Cryoprecipitate

Brian passed on to me John Watt's letter to you of 25 October on this topic some time ago, and I feel I should make one or two comments, particularly as I was specifically quoted.

Edinburgh needs for Factor VIII should be met with a yield of 250 units per kilogramme of plasma, so long as we send about 11,000 kilogrammes per annum for fractionation. However, as you know, usage has increased vastly in the last three years and is also very fluctuant. I cannot therefore be confident that even a rate of 2.75 million units for the 1.12 million population of the Edinburgh Region would be able completely to avoid the need to buy outside sources.

However, I do quite agree that with the onset of a properly pasteurised product, some of the cases for small pool or single donor material, such as cryoprecipitate, will be less strong.

Nevertheless, cryoprecipitate will still be required, either as a freeze-dried product or in frozen liquid form for many patients, at least for the foreseeable future. The cryoprecipitate as currently produced in Edinburgh has characteristics which fulfil most of the needs for non-haemophilic patients. Each frozen pack contains about 100 mls of plasma, with between 300 and 500 units of Factor VIII. The fibrinogen content is approximately double that of normal plasma - ie between 0.3 and 0.6 grammes per pack. The content of fibronectin and von-Willebrand's factor is concentrated to a similar degree as the fibrinogen. This makes it a very useful clinical material, particularly for cases of DIC in childhood. Dr Eden at the Royal Hospital for Sick Children is in fact very impressed with our product. It is also useful for the treatment of adults who are defibrinating, sometimes as a preparation on its own (say 4 packs) or as a supplement to fresh frozen plasma.

If we remove all the haemophilic and von-Willebrand need for cryoprecipitate, there will remain a core of such cases. The number is difficult to estimate, but I feel we would need to continue to process at least 1,000 donations per annum as cryoprecipitate.

The/...

The question of whether this should be kept in liquid form or freeze-dried is not one I feel particularly strongly about, but it is worth commenting that our cryoprecipitate is processed from three donations of platelet-poor plasma pooled into one bag. Actually with the onset of SAG, we are considering reducing the pooling to two. Nevertheless, an early pooling procedure is still carried out. I am therefore not overly convinced that freeze-drying such a product will be very necessary or desirable unless there is a strong advantage in freeze-dried material, such as prolonged shelf life.

Presumably John's comments about purified von Willebrand factor and fibronectin are to be seen in the context of the need to remove fibrinogen from the plasma product before Factor VIII can be pasteurised.

However, as far as fibrinogen is concerned, the clinical situations in which fibrinogen is required are such that there is usually a need for other factors and hence a more global product such as "crude" cryoprecipitate, may well be more advantageous.

As far as fibronectin is concerned, there is always the possibility of a sudden increase in surgical demand and this could well pose problems were this to be met out of a crude preparation. I would be interested in your comments on this.

Kindest regards.

Yours sincerely

GRO-C

Dr F E Boulton

cc Mr John Watt
Dr D B L McClelland