Item 4 of 24/6/86

SCOTTISH NATIONAL BLOOD TRANSFUSION SERVICE
Headquarters Unit Laboratories
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0049

DSP/MAC

Agenda for Next Coag. Sector W.P.

2nd April 1986

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Dr. J.D. Cash
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Ellen's Glen Road
Edinburgh

Dear John,

Thrombogenicity of Surfaces

Further to your note of 27th March on the above, my preliminary thoughts are as follows:

Most published work and activity follows a set pattern of contacting blood/PRP/plasma with a plastic and measuring the responses either in vitro or in vivo. Specifically, the latter is usually concerned with indwelling catheters requiring patency of days or vein prostheses requiring patency of years. Another major area of activity is the "ex-vivo" type of situation exemplified by dialysers where platelet count, bleeding and reactions to sterilants are of interest. None of these traditional interests are of much help to blood transfusion interests because they do not address the problems of fractionated products derived from plasma. I am ignoring for the present the one relevant area of platelet storage plastics as I assume you are mainly interested in fractionated products.

A simple comparison of "good" and "bad" surfaces for indwelling prostheses/dialysers shows that the some plastics do not appear to any great extent on the "BTS" list e.g., things like PVC are on the 'bad' list for surgeons, but on the 'good' list for BTS, whereas things like polypropylene and cellulose acetate which are on the 'good' list for renal dialysis appear to be on the 'bad' list for BTS products (if the Aberdeen/Elstree/PFC data are taken at face value).

The crunch is that we are on our own here and no one else can help to any great extent. I attach great importance to the model fractionation attempts of JKS as no amount of plasma activation marker testing* is of use until validated by fractionation - at the present time the numbers of batches tested are so small as to be equivocal. Would international co-operation e.g., a round-table discussion in Vox Sanguinis be of use??

Kind regards

Yours sincerely

Duncan

Duncan S. Pepper

* A suggested list would be: ionised Ca^{++}, citrate, FpA, β-TG, Stypven time/'Berus' lipid, NAPTT, TG_t50, FVII/VIIa, Platelet Count. No doubt CVP could add to this.