Cryoprecipitate Production by Gravity Sedimentation

A Simple Technique Applicable in Less Developed Countries without Refrigerated Centrifuges

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In a less developed country like Indonesia, not every region possesses a refrigerated centrifuge for producing the cryoprecipitate needed for the treatment of haemophilia A. We have separated cryoprecipitate from fresh whole blood using CPD triple bags, by gravity sedimentation in an ordinary household refrigerator without the help of a refrigerated centrifuge.

Our first 11 bags contained F VIII: C ranging between 71 and 150 units/bag (average 112.3 units/bag). The volume of the cryoprecipitate ranged from 50 to 100 ml/bag (average 71.3 ml/bag). The cryoprecipitate obtained was administered to 2 patients with severe haemophilia (F VIII: C less than 1 %) during three episodes of moderate bleeding. The amount of F VIII: C infused was 21.7, 23.8 and 20.1 units/kg body weight, respectively. The resultant increase in F VIII: C activity was 1.52, 1.55 and 1.72 units/kg body weight. The theoretical increase calculated was 1.73, 1.74 and 1.91 units/kg body weight. The in vivo recovery of the activity was therefore. 88.7, 89.5 and 89.8%, giving good evidence for the potency of the cryoprecipitate. It is hoped that with this method, separation of cryoprecipitate can be performed in regions which do not possess refrigerated centrifuges.