1013; discussion 1013–1004.
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ICVTS on-line discussion A

Title: Plateletpheresis or aprotinin, which is the key element?
Author: Chung-Dann Kan, National Cheng Kung University Hospital, Taiwan 70124, Taiwan
doi:10.1510/icvts.2007.155523A

eComment: From Al-Rashidi’s results, one combination of acute pre-
operative plateletpheresis and a low dose of aprotinin usage can reduce the need for blood transfusion following Ross operation [1]. As is well known, the purpose of aprotinin usage in open heart surgery is to minimize the platelets damage and to preserve their function for coagulation. So, it would be interesting to know if it really needs combination therapy or just one strategy is enough? Also, what is the consideration for extremely low dose of aprotinin usage? Can the author give us more information?

Reference


ICVTS on-line discussion A1

Title: Reply to Kan
Authors: Bansi Koul, Cardiothoracic Surgery, University Hospital Lund, 22185 Lund, Sweden; Faleh Al-Rashidi, Misha Bhat, Leif Pierre
doi:10.1510/icvts.2007.155523A1

eResponse: Our study [1] has shown that acute intraoperative platelet-
pheresis (APP), harvesting platelet-rich plasma equivalent to 25% of the estimated circulating platelet count; in combination with low-dose aprotinin significantly the need for perioperative transfusion of blood products in comparison to low-dose aprotinin alone in patients undergoing Ross operation. Following complex cardiac surgery under cardio-pulmonary bypass (CPB), for APP alone to be effective, what we need to investigate in a prospective manner is the magnitude of an effective APP. This question becomes more pertinent if one plans to utilise APP in patients undergoing surgery under deep hypothermia and circulatory arrest, in which aprotinin is relatively contraindicated. Till the time this question is answered, it appears that the combination of APP with aprotinin or an antifibrinolytic drug reduces the need for perioperative transfusion significantly in compar-
tion to APP alone in patients undergoing complex cardiac surgery under CPB [2]. At present our policy is to give all patients undergoing major cardiac surgery, except those subjected to deep hypothermia and circulatory arrest, 2 million units of aprotinin directly into the CPB circuit after the patients have been re-warmed to 350 °C. This policy enables us to use deep hypothermic circulatory arrest, without hesitation, if we decide for that during on-going routine CPB.

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