Invited Commentary

ATS/2006/112318

Randomized Controlled Trial of Pericardial Blood Processing With a Cell Saver on Neurological Markers in Elderly Patients Undergoing Coronary Artery Bypass Graft Surgery (Invited Commentary)

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This paper addresses an important and very interesting topic, i.e. the potential deleterious effects of retransfusion cardiotomy suction blood to the cardiopulmonary circulation. In a small material such as this study, S100B sampling is the end-point that would yield the most interesting results. The authors have chosen to use only one time for sampling, and rather soon after the operation. The sampling after a couple of hours is known to be fraught with methodological problems, which the authors also point out. It would be interesting to see a couple of S100B samples between 6 and 24 hours. Lacking these data, it is difficult to draw any eliable conclusions from S100B levels in this series of patients.

Albeit the shortcomings of the study, such as small sample size and suboptimal timing of S100B sampling, the findings of the study raises some interesting thoughts. In the cell-saver group they had 3 patients with a history of stroke, and none in the control group. In outcome they found no stroke in the cell-saver group but one in the control group. Although, not even close to any statistical significance, this finding provokes the interesting question whether removing unwanted substances such as cytokines, S100B and lipid particles will decrease the risk of focal ischemic brain damage. It is well known that lipid particles from shed blood will end up in different organs of the body. The hypothesis that lipid particles could be a mechanism behind focal ischemic brain damage is very interesting, and will hopefully be addressed in studies with a larger cohort.