
Clinical Significance of Strategic Leukocyte Filtration in Different Risk Cohorts Undergoing Cardiac Surgery

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Abstract

Systemic inflammatory response syndrome (SIRS) is a well known adverse effect of cardiopulmonary bypass (CPB). SIRS leads to costly complications and combined strategies intended to ameliorate the symptoms that have been studied, including coated circuits and leukocyte reduction using filtration. Although body of work suggests that leukoreduction attenuates SIRS, discrepancies remain within the literature. Risk recognition and risk stratification have received wide acceptance in cardiac surgery over the past decade to improve the credibility of clinical work.

We have studied the relative benefits of strategic leukofiltration across patient risk strata for three different cohorts with the documentation of broad indicators of systemic inflammation, platelet function as well as biomaterial evaluation. A brief background and updated data on inflammatory response to CPB have also been summarized to underline the correlation of results with clinical significance.

Key Words: Cardiopulmonary bypass, Coated materials-Biocompatible, Leukapheresis, Reperfusion injury, Leukocyte Filtration, Surface Modifying Additives