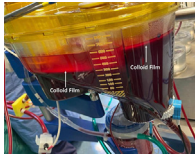


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COLLOID FILM IN OPTIMIZED EXTRACORPOREAL CIRCULATION: “A POSSIBLE ROAD FOR THE EXTINCTION

OF MINIATURIZED CARDIOPULMONARY BYPASS”

To the Editor:

The inflammatory response in cardiac surgery using extracorporeal circulation has been widely discussed in the literature, with analysis on cytokines released in humans. To mitigate this response, mainly linked to the contact and recognition by the blood of a “non-self” surface, many efforts have been made to make the circuits of the extracorporeal circulation “biomimetics,” trying to emulate the cardiovascular system.¹

We read with great interest “Conventional Versus Miniaturized Cardiopulmonary Bypass: A Systematic Review and Meta-Analysis” by Cheng and colleagues.² The authors present a meta-analysis of randomized controlled trials that compare the effects of miniaturized extracorporeal

circulation and conventional extracorporeal circulation on morbidity and mortality rates after cardiac surgery. The authors concluded that miniaturized extracorporeal circulation demonstrates clinical benefits compared with conventional extracorporeal circulation.² In this context, we present the formation of a colloid solution film on the blood surface, after the administration of polygenin 380 ± 80 mL (Emagel) during the establishment of the cardiopulmonary bypass for the integration of the volume. This episode was recorded in particular during 12 procedures with a dynamic venous return greater than 1700 mL in the reservoir Remowell II (Eurosets) and lasted 23 ± 5 minutes. We sent this Letter to the Editor because we think it could be interesting to develop solutions that limit the air–blood contact in optimized open circuits, with the aim of reducing the impact of inflammation during procedures.

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