Trilinolein improves erythrocyte deformability during cardiopulmonary bypass

陳保羅

Tsai SK;Chan P;Lee TY.

摘要

Abstract

The in vitro effect of trilinolein, a triglyceride with linoleic acid as the major fatty acid residue in the esterified positions of glycerol, on erythrocyte deformability was studied in blood samples collected from 12 patients before and after cardiopulmonary bypass (CPB). Erythrocyte deformability was measured with a filtration method and expressed as red cell filtration rate (RFR). RFR was reduced after CPB and the reduction was time dependent. Trilinolein at a concentration of 10(-7) M significantly reversed the CPB-induced reduction of RFR when it was mixed with blood samples collected 30, 60 and 90 min from the start of CPB. This study confirmed the effect of CPB on erythrocyte deformability and showed that this damage could be significantly improved by mixing blood with trilinolein.

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