# Trilinolein reduces infarct size and suppresses ventricular arrhythmias in rats subjected to coromary ligation

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摘要

**Abstract**

Trilinolein, a triacylglycerol with linoleic acid as the only fatty acid residue in all esterified positions of glycerol, was previously found to improve erythrocyte deformability in vitro. In this study, the in vivo antiarrhythmic and anti-ischemic effects of trilinolein in coronary ligated rats were investigated. Male Sprague-Dawley rats were anaesthetized with urethane. Trilinolein, at dosages ranging from 10(-11) to 10(-7) g/kg, was administered intravenously 15 min before ligation of coronary artery. Also, the effect of trilinolein on arrhythmia was studied by ligating the coronary artery for 30 min, then reperfusing myocardium for 10 min. During the 30-min ischemia, trilinolein reduced not only the number of ectopic beats but also the incidence rate and duration of ventricular tachycardia. At 10(-7) g/kg, trilinolein completely suppressed all ventricular arrhythmias. Ventricular arrhythmias during 10 min reperfusion were also reduced by trilinolein at similar dosages. Furthermore, the effect of trilinolein on infarct size was evaluated by occluding the coronary artery for 4 h before the infarct zone was stained and weighed. In rats subjected to 4 h coronary ligation, pretreatment with 10(-7) g/kg trilinolein at 15 min prior to the coronary ligation significantly reduced infarct size. Trilinolein may protect myocardium against ischemic injury and suppress arrhythmia during ischemia and reperfusion

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