

# Abstract

Succinate is one of the intermediate in the Krebs cycle, which in recent years has been shown to interfere with other cellular events, some of which may affect cardiac ischemic tolerance. The aim of this project was to clarify its cardioprotective role in rat hearts subjected to acute ischemia-reperfusion. The myocardial resistance to acute ischemia (infarct size and incidence and severity of ischemic and reperfusion arrhythmias) was analyzed using the Langendorff method of isolated perfused heart at a constant flow with acute succinate administration. Local ischemia was induced by ligation of left anterior descending coronary artery.

Acute administration of 1 mM succinate before 60 minutes of ischemia or before reperfusion only had a beneficial effect on reducing the infarct size by 25-30 % compared to the control group. At the same time, it had an adverse effect on the incidence and severity of ischemic and reperfusion arrhythmias.

Key words: Succinate, heart, rat, heart-attack, ventricular arrhythmias