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Clinical significance of lactate <sup>16</sup> in acute cardiac patients

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#### Abstract

Lactate, as a metabolite of easy and quick assessment, has been studied over time in critically ill patients in order to evaluate its prognostic ability.

The present review is focused on the prognostic role of lactate levels in acute cardiac patients (that is with acute coronary syndrome, cardiogenic shock, cardiac arrest, non including post cardiac surgery patients).

In patients with ST-elevation myocardial infarction treated with mechanical revascularization, hyperlactatemia identified a subset of patients at higher risk for early death and in-hospital complications, being strictly related mainly to hemodynamic derangement.

The prognostic impact of hyperlactatemia on mortality has been documented in patients with cardiogenic shock and in those with cardiac arrest even if there is no cut-off value of lactate to be associated with worse outcome or to guide resuscitation or hemodynamic management. Therapeutic hypothermia seems to affect per se lactate values which have been shown to progressively decrease during hypothermia. The mechanism(s) accounting for lactate levels during hypothermia seem to be multiple, ranging from the metabolic effects of reduced temperatures to

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