

论著

## 丹参在常氧、急性低氧及氧反常等条件下对心室肌细胞L-Ca电流的影响

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**摘要** 目的: 用不同浓度的丹参NaCl溶液作用于常氧、低氧、及氧反常的豚鼠心室肌细胞上, 观察L-Ca通道电流的相对变化, 以期解释丹参减轻及阻止细胞内钙超载的机理。方法: 使用全细胞膜片钳技术研究心室肌细胞L-Ca通道电流的变化。结果: 无论是常氧、缺氧和缺氧后复氧状态下, 浓度为32、320、3 200 mg/L的丹参制剂都能有效降低L-Ca通道电流幅值并呈浓度依赖性。此外, 低浓度32 mg/L的丹参液对缺氧和氧反常细胞的作用更大于常氧细胞。结论: 丹参溶液能有效降低低氧和氧反常造成的异常增大的L-Ca电流幅值, 阻止钙超载发生。

**关键词** [心肌](#); [细胞](#); [丹参](#); [钙通道,L-型](#); [钙超载](#)

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## Effects of salvia miltiorrhizae on L-Ca current in ventricular myocyte of guinea pig during normoxia, acute hypoxia and reoxygenation

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### Abstract

<FONT face=Verdana>AIM: To observe the changes of Ca-L current (ICa-L) and to investigate the mechanism of salvia miltiorrhizae (SM) for eliminating Ca<sup>2+</sup> overloaded in cells during acute hypoxia/reoxygenation. METHODS: The whole cell patch clamp technique was applied to study the changes of ICa-L. Different concentrations (32, 320, 3 200 mg/L) of SM were added to the ventricular myocytes isolated from guinea pigs by enzyme digestion. RESULTS: SM (32, 320, 3 200 mg/L) decreased the amplitude of ICa-L in a concentration-dependent manner regardless of these cells were under normoxia, hypoxia or reoxygenation. Furthermore, SM at low concentration (32 mg/L) was more effective to hypoxia or reoxygenation-treated cells than that to the cells under normoxia condition. CONCLUSION: These results indicate that SM effectively decreases the abnormal raised amplitude of ICa-L in ventricular myocytes under hypoxia or reoxygenation conditions, preventing Ca<sup>2+</sup> overloaded in the cells. </FONT>

**Key words** [Myocardium](#) [Cells](#) [Salvia miltiorrhizae](#) [Calcium channels](#) [L-type](#) [Ca<sup>2+</sup> overload](#)

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