

简报

多柔比星对兔心脏的损伤和牛磺酸的保护作用

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摘要 为了研究多柔比星(Dox)心脏损伤机理和牛磺酸(Tau)的保护作用,将实验兔随机分成Dox组,对照组(即生理盐水组,NS组)和Dox+Tau组。兔均于第12周,测量心输出量(CO),颈动脉收缩压(SP)和舒张压(DP),颈动脉平均压(MAP),左心室收缩压(LVSP)和左心室舒张末压(LVEDP)。取左心室心肌细胞检测细胞内游离钙离子浓度($[Ca^{2+}]_i$);用血清检测一氧化氮(NO)的含量。结果表明,Dox组CO,SP,DP,MAP,LVSP均明显低于NS组,LVEDP显著高于NS组,Dox+Tau组SP,DP,MAP,LVSP均显著低于NS组,LVEDP明显低于Dox组,但明显高于NS组。Dox组和Dox+Tau组血清NO含量均明显高于NS组。Dox组左心室心肌细胞 $[Ca^{2+}]_i$ 明显高于NS组,Dox+Tau组心肌细胞 $[Ca^{2+}]_i$ 明显低于Dox组。本文提示,Tau对Dox损伤心脏具有一定的保护作用。

关键词 [多柔比星](#) [牛磺酸](#) [一氧化氮](#) [钙](#)

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Doxorubicin induced rabbit myocardium injury and protective effect of taurine on myocardium

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Abstract

The New Zealand rabbits were assigned randomly to doxorubicin(Dox) group($n=9$), control group($n=9$) and Dox+taurine (Tau) group($n=8$). Measurements were made on heart rate(HR), cardiac output(CO), systolic pressure(SP), diastolic pressure(DP), mean artery pressure(MAP), left ventricular systolic pressure(LVSP), left ventricular end-diastolic pressure(LVEDP), nitric oxide(NO) content of the serum and calcium in cardiomyocyte($[Ca^{2+}]_i$). CO, SP, DP, MAP and LVSP were significantly decreased in the Dox group compared with the control group ($P<0.01$). LVEDP, NO level of serum and $[Ca^{2+}]_i$ were significantly increased in Dox group compared with the control group($P<0.01$). SP, DP, MAP and LVSP were significantly decreased in the Dox+Tau group compared with the control group($P<0.01$). LVEDP of the Dox+Tau group was significantly lower than that of Dox group and was significantly higher than that of control group ($P<0.01$). Our results suggest that therapeutic dosage of Dox inhibit the cardiac function while the elevated NO content and the elevated $[Ca^{2+}]_i$ could be the causes and Tau would play a protective role on rabbit myocardium.

Key words [doxorubicin](#) [taurine](#) [nitric oxide](#) [calcium](#)

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