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论著

次声作用后血浆NO、ET-1、SOD、MDA水平的变化

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摘要 目的：测定8 Hz、130 dB次声不同时间暴露后大鼠血浆一氧化氮（NO）、内皮素（ET-1）、SOD、MDA水平的变化。方法：用8 Hz、130 dB的次声连续作用大鼠1、7、14、21和28 d，每天2 h，测定大鼠血浆NO、ET-1、SOD、MDA水平。结果：在暴露期间，7、14 d时大鼠血浆NO含量显著最低（P＜0.01），1 d、21 d和28 d时正常（P＞0.05）；大鼠血浆ET-1含量均明显升高（P＜0.01），7 d时升高最多，14 d时升高最少；大鼠血浆SOD活性明显降低（P＜0.01）；大鼠血浆MDA水平明显升高（P＜0.01）。结论：次声可引起大鼠血浆NO、ET-1、SOD、MDA水平的变化，发生的改变与次声暴露时间有关。

关键词 次声； 大鼠； 一氧化氮； 内皮缩血管肽1； 丙二醛； 超氧化物歧化酶
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Plasma levels of endothelin-1, nitric oxide, malondialdehyde and superoxide dismutase in rats exposed to infrasound

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Abstract

<FONT face=Verdana>AIM: To observe the changes of NO, ET-1, SOD and MDA levels in plasma of rats exposed to infrasound. METHODS: Using infrasound (frequency: 8 Hz; sound pressure level:130 dB), the rats were exposed for 1 d， 7 d， 14 d， 21 d and 28 d, 2 h daily, then the levels of NO, ET-1, SOD and MDA were measured after exposure. RESULTS: The changes of NO levels in plasma significantly declined at 7 d and 14 d （P<0.01）, then 1, 21 and 28 d normally （P>0.05）. The changes of ET-1 levels in all groups in plasma were significantly increased （P<0.01）, mostly at 7 d, least at 14 d. The changes of SOD activity in all groups in plasma were significantly declined （P<0.01）. The changes of MDA levels in all groups in plasma were significantly increased （P<0.01）. CONCLUSIONS: Infrasouns induces changes of NO, ET-1, SOD and MDA in rat plasma, and it depends on infrasound exposure time.</FONT>

Key words Infrasound Rats Nitric oxide Endothelin-1 Malondialdehyde Superoxide dismutase

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