

论著

5-羟色胺对去甲肾上腺素诱导大鼠心肌肥厚的影响

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摘要 目的 了解5-羟色胺(5-HT)对去甲肾上腺素(NE)所致心肌肥厚有何影响。方法 大鼠分别ip 5-HT 2 mg·kg⁻¹, NE 2 mg·kg⁻¹或NE 2 mg·kg⁻¹+5-HT 2 mg·kg⁻¹。每日2次,连续给药15 d, d 16麻醉,颈动脉插管,观察累积iv不同剂量5-HT对平均动脉压和心电图的影响,之后处死大鼠,观察心重与体重之比。结果 累积iv 5-HT, NE组和NE+5-HT组大鼠血压明显升高,诱发室速和室颤的鼠数明显增加,但该两组间无显著差异。NE组心室重与体重之比明显增加,NE+5-HT组较NE组相比进一步增加。结论 5-HT加强 NE诱发大鼠心肌肥厚和心律失常的作用。

关键词 [5-羟色胺](#) [去甲肾上腺素](#) [心脏肥厚](#) [血压](#) [心律失常](#)

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Effect of 5-hydroxytryptamine on norepinephrine-induced cardiac hypertrophy in rats

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Abstract

AIM To explore the effects of 5-hydroxytryptamine (5-HT) on cardiac hypertrophy induced by norepinephrine (NE).

METHODS

Rats were treated with 5-HT 2 mg·kg⁻¹, NE 2 mg·kg⁻¹ or NE 2 mg·kg⁻¹+5-HT 2 mg·kg⁻¹ (ip, twice daily for 15 d) respectively. On 16th day the rats were anesthetized and given iv accumulative dosage of 5-HT to observe the changes in blood pressure (BP) and electrocardiogram. Then the rate of heart weight to body weight (HW/BW) was measured.

RESULTS 5-HT (iv, accumulative dosage) markedly increased BP and the number of ventricular tachycardia and fibrillation in groups of NE and 5-HT+NE, and there was no statistical difference between the two groups. The HW/BW increased notably in groups of NE and 5-HT+NE, and the increment of ratio was bigger in group of 5-HT+NE than group of NE ((3.5±0.2) vs (3.2±0.1)g·kg⁻¹, P<0.05). **CONCLUSION** 5-HT enhances the effect of NE inducing cardiac hypertrophy and arrhythmia.

Key words [5-hydroxytryptamine](#) [norepinephrine](#) [heart hypertrophy](#) [blood pressure](#) [arrhythmia](#)

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