

论著

## 原发性高血压患者循环中IGF-1水平与心肌肥厚的研究

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收稿日期 2003-10-8 修回日期 2003-12-9 网络版发布日期 2009-9-15 接受日期 2003-12-9

**摘要** 目的: 探讨原发性高血压(EH)患者循环中的胰岛素生长因子-1(IGF-1)与心肌肥厚的关系。方法: 采取酶免疫分析方法测定53例为原发性高血压患者和16例正常人的血清IGF-1水平。结果: 发现原发性高血压患者循环中的IGF-1水平显著高于正常组( $P < 0.05$ )。高血压病心肌肥厚组的血清IGF-1水平显著高于非心肌肥厚组,  $275.5 \pm 116.4$  vs  $203.8 \pm 82.9$ ,  $P < 0.01$ 。左室重量指数与血清IGF-1存在相关性( $r = 0.45$ ,  $P < 0.01$ )。从IGF-1的水平可以看出在原发性高血压患病时间 $< 15$ 年的LVH患者IGF-1升高明显, 而原发性高血压患病时间( $\geq 15$ 年)IGF-1水平有下降的趋势。以脉压 $\leq 60$  mmHg、 $> 60$  mmHg划分为2个组, 脉压 $\leq 60$  mmHg心肌肥厚有10人; 脉压 $> 60$  mmHg心肌肥厚有20人, 占该组患者的65%, 2组比较 $P < 0.05$ ; 2组的血清IGF-1浓度无显著差异( $P > 0.05$ )。结论: ①原发性高血压IGF-1的升高, 提示IGF-1可能参与高血压某些病理生理过程。②高血压病心肌肥厚组的血清IGF-1浓度的显著升高、左室重量指数与血清IGF-1存在相关性, 提示血清IGF-1有促进心肌肥厚作用。③以患病时间长短来划分, 血清IGF-1在患病时间 $\geq 15$ 年出现有意义降低。④脉压 $> 60$  mmHg患心肌肥厚病人较多, 说明脉压增大与心肌肥厚有关。⑤血清IGF-1水平并没有随脉压增大而增高, 可能在促进心肌肥厚方面有各自作用途径。

**关键词** [高血压](#); [胰岛素样生长因子 I](#); [肥大,左心室](#)

分类号 [R363](#)

## Relation between myocardial hypertrophy and the circulating insulin-like growth factor-1 in patients with essential hypertension

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### Abstract

<FONT face=Verdana>AIM: To investigate the relationship between circulating insulin-like growth factor-1 (IGF-1) and hypertension patients with left ventricular hypertrophy (LVH). METHODS: Serum IGF-1 concentrations in 53 patients with essential hypertension and 16 healthy persons were measured by enzyme immunoassay (EIA). RESULTS: The results showed that serum IGF-1 concentration in essential hypertension was significantly higher than that in non-hypertension. Serum IGF-1 concentration in myocardial hypertrophy was significantly higher than that in myocardial non-hypertrophy ( $275.5 \pm 116.4$  vs  $203.8 \pm 82.9$ ,  $P < 0.01$ ). There was positive correlation between serum IGF-1 and LVMI ( $r = 0.45$ ). 10 of 22 hypertension patients in pulse pressure  $\leq 60$  mmHg group were found to have myocardial hypertrophy, the ratio was 45%. Circulating IGF-1 concentration of patients with hypertension in suffering time  $\geq 15$  years is lower than that in suffering time  $< 15$  years. 20 of 31 hypertension patients in pulse pressure  $> 60$  mmHg were found to have myocardial hypertrophy, the ratio was 65%. There was no significant difference in serum IGF-1 concentration between two groups. CONCLUSION: ①These results indicated that circulating IGF-1 concentration was increased in essential hypertension, suggesting that circulating IGF-1 participates in the pathophysiological process of essential hypertension. ②Serum IGF-1 concentration in myocardial hypertrophy was significantly higher than that in myocardial non-hypertrophy. There was positive correlation between serum IGF-1 and LVMI, indicating that serum IGF-1 may promote myocardial hypertrophy. ③According to the suffering time result, the circulating IGF-1 in hypertension decreased significantly in the patients whose suffering time was less than 15 years. ④The hypertension patients with myocardial hypertrophy showed positive

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correlation with higher pulse pressure (>60 mmHg), indicating that the increase in pulse pressure participates in the course of myocardial hypertrophy. ⑤There was no significant correlation between pulse pressure and serum IGF-1 concentration, suggesting that different mechanisms are involved in the development of myocardial hypertrophy between pulse pressure and IGF-1.</FONT>

**Key words** [Hypertension](#) [Insulin-like growth factor I](#) [Hypertrophy](#) [left ventricular](#)

DOI: 1000-4718

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