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论著

女性血清卵泡刺激素水平与护骨素、瘦素、TGF-β1及TGF-β2之间的关系

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摘要：

目的：了解女性卵泡刺激素（follicle stimulating hormone,FSH）水平与骨代谢密切相关的几种细胞因子之间的关系。方法：测量703例年龄为20~80岁健康女性的血清FSH、护骨素（osteoprotegerin,OPG）、瘦素（leptin）、转化生长因子（transforming growth factor,TGF)β1和β2，并分析它们之间的关系。结果：血清FSH与OPG(r=0.447, P＜0.01)和TGF-β2 (r=0.344, P=＜0.01)呈正相关，与TGF-β1呈负相关(r=-0.374, P＜0.01)；经年龄调整后血清FSH与瘦素呈负相关(r=-0.265, P＜0.01)。多元线性回归分析显示，FSH对TGF-β1是一个负性决定因素，其决定性作用最大为22.6%；FSH对OPG和TGF-β2是一个正性决定因素，其决定性作用分别为9.9%和1.1%。FSH对瘦素几乎无影响。结论：女性年龄相关的FSH水平与血液中细胞因子TGF-β1，OPG和TGF-β2的变化有关。

关键词： 卵泡刺激素 护骨素 瘦素 转化生长因子-&beta 1 转化生长因子-&beta 2

Association of serum follicle stimulating hormone with osteoprotegerin, leptin, TGF-β1, and TGF-β2 in women

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Abstract:

Objective To determine the relation between follicle-stimulating hormone (FSH) level and bone metabolism-related cytokines in women. MethodsA cross-sectional study of 703 healthy Chinese women, aged 20-80 years, was conducted. Serum FSH, osteoprotegerin (OPG), leptin, transforming growth factor-beta 1 (TGF-β1), and transforming growth factor-beta 2 (TGF-β2) were detected.ResultsSerum FSH was positively correlated with OPG (r=0.447, P＜0.01) and TGF-β2 (r=0.344, P＜0.01), and negatively correlated with TGF-β1 (r=-0.374, P＜0.01). After adjustment of age, a negative correlation was found between FSH and leptin (r=-0.265, P＜0.01). The multiple linear stepwise regression analysis showed that serum FSH was a negative determinant factor of TGF-β1, and 22.6% changes in TGF-β1 was determined by FSH. FSH was, however, a positive determinant factor of OPG and TGF-β2, and 9.9% and 1.1% of the effect on OPG and TGF-β2 was performed by FSH, respectively. Serum FSH almost had no effect on leptin. Conclusion Serum FSH level in adult women is related to bone metabolism-related cytokines, such as TGF-β1, OPG, and TGF-β2.

Keywords: FSH；osteoprotegerin；leptin；TGF-β1；TGF-β2

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