

论著

HIF-1 $\alpha$ 与iNOS在银屑病皮损中的表达及其与血管生成的关系

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摘要:

目的: 探讨缺氧诱导因子-1 $\alpha$ (HIF-1 $\alpha$ )和诱导型一氧化氮合酶(iNOS)在银屑病皮损组织中的表达并分析两者的相关性, 同时研究两者在银屑病血管形成中所起的作用。方法: 采用免疫组织化学SABC法和Western 印迹检测32例银屑病皮损组织和20例正常人皮肤组织中HIF-1 $\alpha$ 与iNOS蛋白的表达; 同时用CD34标记血管内皮细胞, 并计算微血管密度(MVD)。结果: 20例正常对照组表皮组织HIF-1 $\alpha$ 和iNOS表达弱或几乎无表达; 32例银屑病患者皮损组织中HIF-1 $\alpha$ 和iNOS均为强表达, 且与正常对照组相比, 差异有统计学意义( $P<0.05$ )。银屑病患者皮损组织中HIF-1 $\alpha$ 和iNOS的表达均与MVD值呈明显正相关(分别为 $r=0.743$ ,  $P<0.01$ ;  $r=0.639$ ,  $P<0.01$ ); 银屑病患者皮损组织中iNOS的表达与HIF-1 $\alpha$ 的表达呈明显正相关( $r=0.717$ ,  $P<0.01$ )。结论: 银屑病患者皮损组织存在HIF-1 $\alpha$ 和iNOS蛋白的过表达, 可能通过促进银屑病新生血管的生成, 对银屑病的发生发展起重要作用。

关键词: 银屑病 缺氧诱导因子-1 诱导型一氧化氮合酶 血管生成

Expression of iNOS and HIF-1 $\alpha$  with angiogenesis in affected skin biopsies from patients with psoriasis

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Abstract:

Objective To investigate the expression of inducible nitric oxide synthase (iNOS) and hypoxia-inducible factor 1(HIF-1)  $\alpha$  in psoriatic lesions, and to explore their relationship with angiogenesis in psoriasis. Methods HIF-1 $\alpha$  and iNOS protein were detected by immunohistochemistry and Western blot in 32 cases of psoriasis and 20 healthy controls, and CD34 marking vascular endothelial cells were used to measure the microvascular density (MVD). Results The expressions of HIF-1 $\alpha$  and iNOS protein were very weak in the control skin, but very strong in psoriatic lesions, which showed significant difference in the expressions of iNOS and HIF-1 $\alpha$  between the psoriasis and the control group ( $P<0.05$ ). Expression of HIF-1 $\alpha$  ( $r=0.743$ ,  $P<0.01$ ) and iNOS ( $r=0.639$ ,  $P<0.01$ ) had positive correlation with MVD in psoriasis respectively. There was a positive correlation between iNOS and HIF-1 $\alpha$  expression in psoriasis ( $r=0.717$ ,  $P<0.01$ ). Conclusion Both iNOS and HIF-1 $\alpha$  have high expression in psoriasis and might play an important role in the genesis and development of psoriasis.

Keywords: psoriasis; iNOS; hypoxia-inducible factor-1 $\alpha$ ; angiogenesis

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