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论文

盐酸西替利嗪对IgE诱导的皮肤三相过敏反应 P物质表达的影响

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摘要：

目的研究盐酸西替利嗪对IgE诱导的皮肤三相过敏反应中神经肽P物质表达的影响。方法采用BALB/c小鼠尾静脉注射anti-DNP IgE单克隆抗体，以2,4-二硝基氟苯(DNFB)激发，建立皮肤三相过敏模型。口服给予不同剂量的盐酸西替利嗪，于激发后特定时间点取小鼠双耳，进行病理学检查与免疫组化分析。采用放射免疫法测定皮肤中P物质的含量变化。结果BALB/c小鼠耳皮肤在DNFB激发后1 h,24 h,7 d分别出现速发相(IPR)、迟发相(LPR)、超迟发相(vLPR)三相过敏反应，P物质在三相过敏反应中的表达逐渐增强。高、低剂量的盐酸西替利嗪均能显著抑制皮肤速发相反应引起的耳肿胀，而对超迟发相反应无明显影响，且盐酸西替利嗪可降低皮肤三相过敏反应中P物质的含量。结论神经肽P物质参与了皮肤过敏反应的病理过程，盐酸西替利嗪抑制P物质的表达可能是其抗过敏的作用机制之一。

关键词： 盐酸西替利嗪 皮肤过敏 三相过敏反应 P物质

Effect of cetirizine hydrochloride on the expression of substance P in IgE-mediated triphasic cutaneous reaction

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Abstract:

AimTo investigate the effect of cetirizine hydrochloride on the expression of neuropeptide substance P (SP) in IgE-dependent triphasic cutaneous reaction induced by dinitrofluorobenzene (DNFB) in the ears of BALB/c mice. MethodsBALB/c mice were passively sensitized by intravenous infection of anti-DNP IgE monoclonal antibody 24 h before DNFB challenge. Skin reaction was elicited by applying DNFB to both sides of each ear of sensitized mice. Mice were treated with cetirizine (1 and 10 mg·kg^{-1}, ig). The ears were removed for pathohistological examination and immunohistochemical staining of SP at different designated times after challenge. The contents of SP in the skin of mouse ear were determined by radioimmunoassay (RIA). ResultsThe mice exhibited a triphasic cutaneous reaction with an immediate-phase response (IPR) at 1 h, a late-phase response (LPR) at 24 h and a very late-phase response (vLPR) at 7 days after challenge with DNFB. The expression of SP in different phases increased gradually. Cetirizine (1 and 10 mg·kg^{-1}) was shown to significantly inhibit the ear swellings induced by the IPR (P<0 01), while no obvious effect on the vLPR. The SP contents in ear skin of triphasic cutaneous reaction were decreased by cetirizine. ConclusionSP is considered to be involved in the pathogenesis of allergic dermatitis. Cetirizine hydrochloride can inhibit the expression of SP in IgE-dependent triphasic cutaneous reaction. It might be part of the mechanisms of anti-anaphylaxis of cetirizine.

Keywords: allergic dermatitis triphasic cutaneous reaction substance P cetirizine hydrochloride

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