

论文
环磷酸胺条件性免疫抑制反应动物模型的建立及有关机制的分析

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摘要:

关键词: 环磷酸胺;樟脑; 2, 4-二硝基氯苯; 条件性免疫反应

BUILDING UP OF AN ANIMAL MODEL OF CONDITIONED IMMUNOSUPPRESSION AND ANALYSIS OF ITS POSSIBLE MECHANISM

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Abstract:

In the present study, camphor odor and intraperitoneal(ip) injection of cyclophosphamide(CY) were used as conditional and unconditional stimulus, respectively, in mice. Mice were exposed to camphor odor for 1h in their cage in a closed area followed by an ip injection of CY(75 mg·kg⁻¹). This association trial session was repeated once on the next day. Delayed type hypersensitivity response(DTH) was induced as follows: six days after the second association trial session the mice were sensitized by smearing dinitrochlorobenzene(DNCB) on their abdominal skin. The mice were challenged by smearing DNCB on the left ear 5 days after the antigen sensitization. The left and right ears were removed 24 h after the challenge and weighed, the weight ratio of left/ right ears was calculated for identification of the response. The ratio was 1.30±0.113(±s, P<0.001), indicating that the challenged ear was heavier than the other and DTH was induced. In the unconditioned response(UCR) group, CY(75 mg·kg⁻¹) was given 24 h prior to the challenge and the ratio was 1.09±0.024(P<0.001) indicating that DTH was suppressed by unconditional stimulus(CY). In the conditioned response(CR) group mice were reexposed to camphor odor 24 h prior to the challenge and normal saline was injected instead of CY. The ratio was 1.13±0.074(P<0.001), indicating that DTH was also suppressed by conditional stimulus(camphor odor). These results show that a conditioned immunosuppressive response was induced. In the experiment, many other groups, including unconditioned response group, CYE group and camphor control group, were described in more details in the text. In order to further analyse the mechanisms of the conditioned response, the blood from the mice in CR group was obtained 6 h after reexposure to camphor odor and the serum was injected to normal mice 6h prior to the challenge. DTH was found to be suppressed significantly when compared with the mice injected with normal serum. The conditioned serum was dialyzed against a membrane with a 10 000 molecular weight cut off. The suppressive activity of the conditioned serum disappeared, suggesting that the molecular weight of the suppressive element in the serum was probably less than 10000kDa.

Keywords: Camphor 2,4-Dinitrochlorobenzene Conditioned immunolresponse Cyclophosphamide

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