

论文

1 α ,25-二羟维生素D₃及其类似物对单核细胞衍生

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摘要:

目的研究骨化三醇及其类似物他骨化醇和24,25(OH)₂D₃对单核细胞衍生的树突状细胞(MoDC)的吞噬功能的调节作用。方法以MoDC为研究对象。用流式细胞术分析甘露糖受体(MR)和Fc γ 受体的表达,根据细胞摄入酵母多糖的能力评价细胞的吞噬功能。结果骨化三醇和他骨化醇上调MoDC对MR和Fc γ 受体的表达,增加MoDC对酵母多糖的摄入使细胞有更强的吞噬功能,但24,25(OH)₂D₃却无这些调节作用;骨化三醇和他骨化醇的上调作用发生在MoDC分化的早期阶段并且是不可逆的;骨化三醇的作用呈浓度依赖方式。结论骨化三醇及其类似物他骨化醇可能在免疫应答的开始阶段即DC结合和摄取外来抗原的阶段起重要的调节作用。

关键词: 骨化三醇 树突状细胞 吞噬功能

1 α ,25-DIHYDROXYVITAMIN D₃ AND ITS ANALOGUES MODULATE THE PHAGOCYTOSIS OF HUMAN MONOCYTE-DERIVED DENDRITIC CELLS

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Abstract:

AIMTo investigate the role of 1 α ,25-dihydroxyvitamin D₃ (calcitriol) and its analogues tacalcitol and 24,25(OH)₂D₃ on the phagocytosis of human monocyte-derived dendritic cells (MoDC). METHODS MoDC were generated *in vitro* by differentiating monocytes in the presence of GM-CSF and IL-4 for 5 days. Expression of mannose receptor (MR) and Fc γ receptors (Fc γ Rs) by MoDC was analysed by flow cytometry. Zymosan ingestion was measured to assess the phagocytosis of MoDC. RESULTS MoDC expressed high level of MR and Fc γ Rs and showed the capacity of zymosan ingestion. Calcitriol and tacalcitol but no 24,25(OH)₂D₃ not only upregulated the expression of MR and Fc γ Rs on MoDC but also correspondingly enhanced their phagocytosis by increasing zymoasan ingestion. Furthermore, the upregulatory role occurred in the early stage of MoDC differentiation and was irreversible. The upregulatory role of calcitriol was dose dependent. CONCLUSION Calcitriol and its analogue tacalcitol may play an important role in dendritic cell binding and capturing foreign antigens at the initiation of immune response.

Keywords: monocyte-derived dendritic cell phagocytosis calcitriol

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