

论著

透明质酸对人结肠癌细胞SW480增殖、粘附和侵袭能力的影响

卓文磊¹; 王彦²; 陈正堂¹,

1.第三军医大学新桥医院全军肿瘤中心, 重庆 400037; 2.第三军医大学新桥医院全军呼吸内科研究所, 重庆 400037

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摘要 背景与目的: 透明质酸广泛存在于结肠癌间质中, 本研究旨在探讨透明质酸(hyaluronan, HA)对体外培养的人结肠癌SW480细胞增殖、粘附和侵袭能力的影响。材料与方法: 体外培养的SW480细胞被随机分为3组: 对照组(无血清培养基培养)、HA1(HA为10 μg/ml)和HA2(HA为20 μg/ml)组, 经培养不同时间后, 以MTT实验和软琼脂细胞集落形成实验(soft agar clone formation assay)比较SW480细胞增殖能力, 用平板粘附模型和Boyden chamber小室模型比较SW480细胞粘附和侵袭能力。结果: HA1和HA2组与对照组相比, 细胞增殖数量、软琼脂细胞集落、粘附于平板和穿过Boyden chamber隔膜的细胞数皆显著增加(P<0.05), 且呈剂量依赖性。结论: HA能增强SW480细胞体外增殖、粘附和侵袭能力。

关键词 [透明质酸](#); [增殖](#); [粘附](#); [侵袭](#); [SW480细胞](#)

Effects of Hyaluronan in Proliferation, Adhesion and Invasion Abilities of Human Colon Carcinoma Cell SW480 in Vitro

ZHUO Wen-lei¹, WANG Yan², CHEN Zheng-tang¹,

1. Cancer Research Center of Xinqiao Hospital, Third Military Medical University, Chongqing 400037; 2. Institute of Respiratory Disease research, Xinqiao Hospital, Third Military Medical University, Chongqing 400037, China

Abstract **BACKGROUND & AIM:** Hyaluronan(HA), a kind of polysaccharide with high molecular weight, is present extensively in the mesenchyme of colon carcinoma. The objective of this study was to investigate the effects of HA on proliferation, adhesion and invasion abilities of human colon carcinoma cell SW480 in vitro. **MATERIALS AND METHODS:** cultured SW480 cells were divided into three groups: control group (C): cultured with serum-free medium(SFM); HA1 and HA2 treatment groups: cultured with SFM containing different concentrations of HA (HA1: 10 μg/ml, HA2: 20 μg/ml). After some time, proliferation ability was examined by MTT assay and soft agar clone formation assay, while adhesive and invasive abilities were assessed by plate adhesion model and Boyden chamber transwell assay. **RESULTS:** Compared with that in C group, in HA1 and HA2 treatment groups, the number of proliferative cells, soft agar cell clone formation, cell adhesion on plate and septum permeation of Boyden chamber increased significantly in HA1 and HA2 treatment groups in a HA dose-dependent manner(P<0.05). **CONCLUSION:** HA could enhance the proliferation, adhesion and invasion abilities of human colon carcinoma cell SW480 in vitro.

Keywords [hyaluronan](#) [proliferation](#) [adhesion](#) [invasion](#) [SW480 cell line](#)

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