

论著

Snail在17β雌二醇所引起的卵巢透明细胞癌ES-2细胞系侵袭力增加中的作用

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摘要

目的 转录因子Snail可诱发上皮细胞-间充质细胞转化(epithelial-mesenchymal transitions,EMT),在肿瘤的黏附、侵袭、转移中起重要作用。本研究通过RNA干扰抑制Snail的表达,观察Snail表达抑制后是否影响17β雌二醇对卵巢透明细胞癌细胞系ES-2细胞趋向运动、侵袭力及MMP-2表达的调控。方法 构建针对Snail的dsRNA表达载体pRNAT-U6.1/Neo-Snail,瞬时转染抑制Snail表达。10-8mol/L 17β雌二醇及DMSO分别作用于阴性对照组及RNAi组细胞,用改良的Boyden小室检测细胞侵袭力、运动力的变化,RT-PCR检测MMP-2 mRNA表达的改变情况,明胶酶谱检测基质金属蛋白酶活性。结果 用针对Snail的RNAi阻断Snail表达后,可使ES-2细胞胞质突起变短,细胞的趋向运动力、侵袭力及MMP-2表达降低;针对Snail的RNAi可部分阻断17β雌二醇对ES-2细胞趋向运动力、侵袭力的调节,并可阻断17β雌二醇对细胞MMP-2表达的调节作用。结论 Snail在雌激素引起的卵巢透明细胞癌肿瘤细胞侵袭能力增强的过程中起重要作用,可作为卵巢透明细胞癌治疗的重要靶点。

关键词 [雌激素](#); [卵巢癌](#); [Snail](#); [RNA干扰](#); [基质金属蛋白酶2](#)

分类号

The Role of Snail in 17β-Estradiol -Induced Increased Invasion of Ovarian Clear Cell Adenocarcinoma Cell Line ES-2

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Abstract

Objective The transcription factor Snail, which is implicated in the triggering of epithelial-mesenchymal transitions (EMT), plays an important role in adhesion, invasion and metastasis of tumor cells. In the present study, we induced Snail gene silencing by RNA interference to explore the effect of estradiol (E2) on the mobility, invasion and MMP-2 expression in ovarian clear cell adenocarcinoma cell line ES-2 when Snail gene expression was blocked. Methods We constructed the small interfering dsRNA expression vector (pRNAT-U6.1/Neo-Snail) targeting Snail gene, and the cells were transiently transfected with the vectors. After treated with 10-8mol/L 17β-estradiol or DMSO only, the invasion and mobility assay were performed by using the modified Boyden chambers. MMP-2 mRNA expression was measured by RT-PCR, and MMP-2 activity was detected by Zymography. Results In the RNAi group transfected with pRNAT-U6.1/Neo-Snail targeting Snail gene, the cytoplasmic process of ES-2 cells became shortened, and the invasion, mobility and MMP-2 expression of the cells decreased. RNA interference targeting Snail partly abrogated the effect of 17β-estradiol on cell invasion, motility, and this might be attributed to the blockade of estradiol-induced MMP-2 expression mediated by Snail. Conclusion Snail plays a vital role in estrogen-induced invasion of ovarian clear cell adenocarcinoma, and it may serve as an important target in the treatment of ovarian clear cell adenocarcinoma.

Key words [estrogens](#) [ovarian cancer](#) [Snail](#) [RNA interference](#) [matrix metalloproteinase-2](#)

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