

عنوان مقاله:

Study The effects of adiponectin decrease on breast cancer

محل انتشار:

یازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

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خلاصه مقاله:

Introduction: Adiponectin is a 244-amino-acid-long polypeptide. Adiponectin is present in three oligomeric forms in the circulation: a low-molecular-weight trimer, a middle-molecular-weight hexamer, and a high-molecular-weight oligomer. Adiponectin is secreted from adipose tissues and acts through its two receptors AdipoR1 and AdipoR2. The present study examined the effects of adiponectin decrease on breast cancer development. Results: Adiponectin has different functions. This hormone inhibites cell growth and proliferation. It inhibited MAPK phosphorylation and inactivated this factor. MAPK stimulates proliferation, therefore a reduction in adiponectin level led to MAPK activation. Also, adiponectin involved in the induction of apoptosis by down-regulating BAG1, an anti-apoptotic factor, and upregulating MX1, an apoptosis inducer factor. Adiponectin also involved in activation of caspase8 and PPAR which stimulated apoptosis by reducing adiponectin. Moreover, reduction of adiponectin increased IGF-1 and VEGF, and inhibited PPAR and therefore stimulated angiogenesis. Adiponectin also down-regulated KIAA132, KRT18, EVL. Besides, this hormone had anti-estrogen properties and inhibited aromatase activity. Conclusion: The reduction of adiponectin because of some metabolic dysregulations such as obesity and type 2 diabetes are associated with higher risk of breast cancer. As a result the present study explains some targets of adiponectin that may be relevant to the diagnosis and therapy of breast cancer.

کلمات کلیدی:

adiponectin, breast cancer, regulations factor

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