

عنوان مقاله:

Inhibition of leptin gene expression and secretion by silibinin: possible role of estrogen receptors

محل انتشار:

یازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

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خلاصه مقاله:

Introduction: Leptin plays the role of mitogenic factor in the breast carcinogenesis. Therefore, it could be considered as a target for breast cancer therapy. Leptin gene expression could be modulated by activation of estrogen receptors. Silibinin is an herbal compound with anti-cancer activity on prostate and colorectal cancers. Based on the fact that targeting of leptin can be considered as a novel strategy for breast cancer therapy, the aim of this study was the investigation of potentiality of silibinin for inhibition of leptin gene expression and secretion, and its link with expression of estrogen receptors. Method and materials: Cytotoxic effect of silibinin on T47D breast cancer cells was investigated by MTT assay test after 24, 48 and 72 h treatments with different concentrations of silibinin. The levels of leptin, estrogen receptor a and estrogen receptor b genes expression was measured by reversetranscription real-time PCR. The amount of secreted leptin in the culture medium was determined by ELISA. Data were statistically analyzed by oneway ANOVA test. Results: Silibinin inhibits growth of T47D cells in a time and dose dependent manner. There was significant difference between control and treated cells in the levels of leptin, estrogen receptor b expression levels and the quantity of secreted leptin was decreased in the treated cells in comparison to control cells. Conclusion: In conclusion, silibinin inhibits the expression and the secretion of leptin and in the future it might probably be a drug candidate for breast cancer therapy through leptin targeting.

کلمات کلیدی:

Leptin -Silibinin - Breast cancer -T47D cell line

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