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Sirtuin 6 expression in colorectal adenocarcinoma

Dalia Nabil Abdelhafez, Reham Shehab El Nemr and Heba Hiekal Mahmmoud
Mouhammed

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Abstract:

Background: SIRT6, a NAD⁺-dependent deacetylase sirtuin 6 has been demonstrated to inhibit tumor development in a variety of cancers. Colorectal carcinoma is a difficult malignancy with high morbidity and mortality rates. However, it is unknown if SIRT6 has a direct role in colon carcinogenesis or what the underlying mechanism.

Aim and objectives: The aim of this work was to study the expression of SIRT6 in colorectal carcinoma and its correlation with other pathological prognostic factors to clarify the role of SIRT6 in colorectal cancer and determine whether SIRT6 could be a potential new prognostic biomarker for patients with colorectal cancer.

Subjects and methods: We studied the tissues of 40 colorectal cancer patients to see whether SIRT6 has a role in colon cancer. Tumor tissue sections have been stained with hematoxylin & eosin, and immunostained for SIRT6.

Results: The clinicopathological features of all cases were studied and statistical correlations between SIRT6 expression and clinicopathological parameters were done showing significant relations between SIRT6 expression and both tumor size & distant metastases with P value = (0.042 & 0.016) respectively.

Conclusion: SIRT6 is thought to play significant role in the tumorigenesis of cancer colon, larger studies of all cancer colon variants are recommended for further declaration of each role.

Keywords: Sirtuin 6, colorectal, adenocarcinoma, colon cancer