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Peculiarities of expression of apoptosis markers in the tissues of primary fallopian tubes carcinoma

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Aim: Immunohistochemical analysis of apoptosis markers in the tissue of PFTC.

Introduction: Primary fallopian tubes carcinoma is a rare case among oncological diseases of female genital organs, but the mortality rate is rather high. Nowadays, the prognostic factors of this neoplasia are not fully determined. The data on the p53 and bcl2 proteins expression and their use as prognostic factors in patients with malignant tumors of many locations are contradictory.

Methods: The study was conducted on 66 samples of fallopian tubes tumor tissue. To study the apoptosis peculiarities of tumor cells the mouse monoclonal antibodies for bcl-2 (clone 100/DS) and p53 (clone SP5) were used. Mathematical calculations were done using Microsoft Excel 2010 with AtteStat 12.0.5.

Results: The high expression of p53 was found in patients of all clinical stages. Mutations of p53 increased with spreading of the neoplastic process. Strong correlation of p53 presence in tumor samples and clinical stage of the disease was determined ($r = 0.77$). In contrast to the abovementioned protein the study of bcl-2 showed the moderate negative correlation between this protein and the stage of the disease ($r = -0.54$). Analysis of the dependence of p53 expression with the presence or absence of lymph nodes metastasis showed a direct correlation between the indicators ($r = 0.25$). Thus the level of p53 expression in patients with N1 was 80.6 + 2.7% compared with the N0 group (29.7 ± 3.6%). The stage of neoplasia differentiation is in moderate direct correlation with p53 expression ($r = 0.58$) and in inverse with – bcl-2 ($r = -0.64$).

Conclusion: Expression of p53 depends on neoplasia spreading and stage of tumor differentiation. The expression of p53 is an independent prognostic marker for N-status and helps to classify the patients into “risk” groups.

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Impact of prior malignancies on the outcome of colorectal cancer: Revisiting clinical trial eligibility criteria

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Aim: To study the impact of prior malignancies on the survival of subsequent CRC.

Introduction: Colorectal cancer (CRC) is the third most common cancer in the US.1–3 Some studies have correlated a prior history of malignancy with an increased incidence of CRC. Patients with history of cancer are generally excluded in clinical trials. This practice, not only affects clinical trials accrual, but also limits the potential therapeutic options for this population. The rationale behind this exclusion is that a history of malignancy could potentially interfere with the study outcomes.4 However, little is known about its real impact on survival of subsequent CRC.

Methods: We identified patients with CRC diagnosed between 1973 and 2008 using the National Cancer Institute's SEER database.5–6 Outcomes of interest were overall survival and cause-specific survival of subsequent CRC in general, and specifically stage IV disease. Unadjusted Kaplan-Meier test and multivariable covariate-adjusted Cox models were used to assess the eligibility of enrollment of stage IV CRC patients in clinical trials.

Results: Overall, 550,325 patients with CRC were identified, of whom 31,663 patients had a prior malignancy. Both, history of prior non-leukemic malignancy and prior leukemia were associated with a worse overall survival (HR = 1.165 95% CI = 1.148–1.183, P < 0.001) and (HR = 1.825 95% CI = 1.691–1.970, P < 0.001), respectively. However, a history of any prior non-leukemic malignancy showed a favorable colorectal-specific survival (HR = 0.930 95% CI = 0.909–0.952, P < 0.001). Analysis of stage IV CRC showed that a history of any prior non-leukemic malignancy was not associated with a significant difference in overall survival but having a history of leukemia showed a worse overall survival (HR = 1.535, 95% CI = 1.303–1.809, P < 0.001).

Conclusion: Clinical trials should take these results into consideration when including/excluding stage IV CRC patients with prior malignancies.

References

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Intervention of diabetes mellitus and metabolic risk factors in AMPK-PGC1α-SIRT3 pathway in the human corpus cavernosum

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Aim: To study the intervention of diabetes mellitus and metabolic risk factors in AMPK-PGC1α-SIRT3 pathway in the human corpus cavernosum.

Introduction: Diabetes mellitus (DM) and its complications are rising worldwide. DM is one of the main risk factors for the development of erectile dysfunction (ED). Recent studies have shown a significant association between DM and ED. However, the molecular mechanism of this association is not fully understood.

Methods: We performed a comprehensive literature search using PubMed, Web of Science, and Embase databases up to August 2017. We included studies that evaluated the effect of diabetes mellitus and metabolic risk factors on AMPK-PGC1α-SIRT3 pathway in the human corpus cavernosum.

Results: Our search yielded 15 relevant studies. Among these, we found that diabetes mellitus and metabolic risk factors significantly affect the AMPK-PGC1α-SIRT3 pathway in the human corpus cavernosum.

Conclusion: Our findings suggest that diabetes mellitus and metabolic risk factors have a significant impact on the AMPK-PGC1α-SIRT3 pathway in the human corpus cavernosum. These findings have important implications for the development of novel therapeutic strategies for the treatment of ED.

References