

EVALUATION OF CORRELATION BETWEEN EXPRESSION OF P53 AND MALONDIALDEHYDE LEVELS IN PROSTATE CANCER PATIENTS

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Prostate cancer (CaP) is most commonly diagnosed non-dermatological solid malignancy with a high metastatic rate. The growing prevalence of cancer survivors was estimated to be over 28 million worldwide. Tumour suppressor gene, p53 has an important role in CaP. Serum malondialdehyde (MDA) is a convenient *in vivo* index of lipid peroxidation. It is a non-invasive biomarker of oxidative stress. Current study was designed to determine correlation between expression of p53 and MDA levels in CaP as compared to normal control. This is a cross-sectional analytical study which was conducted at Department of Biochemistry & Molecular Biology, Department of Urology, Rawalpindi, National University of Science and Technology, Islamabad over a period of one year. Study included 26 samples. Expression of p53 and levels of MDA were determined by real time PCR and ELISA technique respectively. It has been seen that CaP is an age related disease. We have compared mean value of MDA in CaP and control group, the difference was statistically significant ($p=0.002$). Gleason score 8 showed statistically significant increases in MDA as compared to control group among all other Gleason score (6, 7 and 9). Optimum annealing temperature required for annealing of our designed primers in optimum conditions was 55.6°C. We have compared mean CT value of CaP with control group, the difference was statistically significant ($p<0.05$). Expression of p53 was 0.18 folds decrease in CaP as compared to control group. There was a weak inverse correlation between expression of p53 and MDA in CaP group. MDA may be used as biomarker to determine progression of CaP. Expression of p53 may also be utilized as a good biological marker for diagnosis of CaP.

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