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Serum Zn and Cu Levels in Patients with Benign Prostate Hyperplasia (BPH) and Prostate Carcinoma (PCa) and their Association with the Stage of the Disease in Carcinoma of Prostate Patients

M. Ghani[1], M. R. Khan[2*], M. Z. Ahmed[1], S. Mahmood[1], I.A. Shah[1], I. Fayyaz[1] and S. Akram[1]

1. Department of Biochemistry, University of Health Sciences, Lahore, **PAKISTAN**
2. Department of Environmental Science and Policy, Lahore School of Economics, Lahore, **PAKISTAN**

Email: drrafiq@lahoreschool.edu.pk, khanmr1939@yahoo.com

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ABSTRACT

Carcinoma of the prostate (PCa) is one of the most commonly diagnosed malignancy afflicting the men which is a leading cause of carcinoma related mortality in men. Effect of trace elements like zinc and copper has been studied extensively in the recent years to evaluate their role in pathogenesis of various neoplasms including prostate carcinoma. The objective of this study was to seek an association of serum zinc and copper levels with stage of the disease in patients with carcinoma of the prostate. Cross-sectional analytical study design was employed after sampling 60 indoor elderly male patients (30 years age) matched healthy males. 30 patients with organ confined, 30 patients with advanced metastatic carcinoma of the prostate and 30 cases with benign prostatic hypertrophy were included as three groups of patients. The fourth group included was 30 healthy individuals of same age group as controls. Zinc and copper levels in the sera were measured by standard techniques using atomic absorption spectrophotometer. Significant difference was observed in Zn levels of four groups ($P<0.001$). Zn levels in the sera were significantly decreased in organ confined and metastatic PCa groups (78 ± 14.58, 66 ± 14.24) compared with healthy controls (93 ± 18.21). From the results it may be concluded that a significant percentage of deaths resulting from cancer may be avoided through greater attention to proper and adequate nutrition with due regard to Zn and Cu intake.

Keywords: Serum Zn and Cu levels, Patients with Benign Prostate Hyperplasia (BPH) and Prostate Carcinoma (PCa)**,** Stage of the Disease in Carcinoma of Prostate Patients.