

Serum Interleukin-8 and Insulin like Growth Factor-1 in Egyptian Bladder Cancer Patients

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Background: Bladder cancer is a major health problem in Egypt as it represents the most common malignancy.

Aim: Evaluation of the potential usefulness of serum IL-8 and IGF-1 in Egyptian bladder cancer patients.

Methods: Serum levels of IL-8 and IGF-1 were determined in 51 bladder cancer patients and 45 controls using a chemiluminescence enzyme immunometric assay.

Results: Serum IL-8 was significantly higher in cancer patients than in controls ($P < 0.0001$). It was significantly higher in patients with invasive cancer than those with superficial cancer ($P < 0.01$). Also, IL-8 showed a significant elevation in relation to schistosomal infection ($P = 0.02$) however, it did not differ in relation to either pathological type of tumor or its grade ($P > 0.05$). Receiver operating characteristic (ROC) curve indicated that IL-8 cut-off value of 35 pg/mL yielded the best combination of sensitivity (71%) and specificity (98%) for differentiating patients with bladder cancer from control subjects. Serum IGF-1 levels showed no significant difference between bladder cancer patients and controls ($P > 0.05$). There was no relationship between IGF-1 levels and clinicopathological parameters.

Conclusions: In Egyptian patients with bladder cancer, serum IL-8 is significantly elevated and its level is related to tumor invasion and associated schistosomal infection. Moreover, serum IGF-1 level does not help as a serum tumor marker in these patients.

Keywords: Interleukin-8, insulin like growth factor-1, bladder cancer.