Serum interleukin-8 and insulin like growth factor-1 in Egyptian bladder cancer patients

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Abstract

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.