عنوان مقاله:

Investigation of FOXP۳ genetic variations at positions -۲۳۸۳ C/T and IVS۹+۴۵۹ T/C in southern Iranian patients with lung carcinoma

محل انتشار:

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خلاصه مقاله:

Objective(s): FOXP۳ gene is an X-linked gene that encodes FOXP۳ protein, an essential transcription factor in CD۴+CD۲۵+FOXP۳+ regulatory T (Treg) cells. We aimed, in the present study, to investigate the association of two FOXP۳ polymorphisms, -۲۳۸۳ C/T (rs۳۷۶۱۵۴۹) and IVS۹+۴۵۹ T/C (rs۲۲۸۰۸۸۳), with lung cancer. Materials and Methods: In a case-control study we analyzed genotypes and alleles frequencies at -۲۳۸۳ C/T and IVS۹+۴۵۹ T/C positions in ۱۵۶ patients with lung cancer and ۱۵۶ age and sex matched healthy controls in Southern Iranian population, using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) methods. The data were verified by direct automated DNA sequencing. Results: The frequency of -۲۳۸۳ T allele was significantly higher in the patients than in the control group (۱۱.۸% versus ۵.۹%, P-value=۰.۰۴, OR=۲.۱۳, ۹۵%CI=۱.۰۴-۴.۵۴). T allele frequency at IVS۹+۴۵۹ T/C position was higher, compared to the controls, in the patients who presented the disease over ۵۵ years old (۶۹.۹% versus ۵۹.۱%, P-value=۰.۰۴, OR=۱.۶۱, ۹۵%CI=۱.۰۱-۲.۵۵) and also in SCLC patients (۷۷.۸% versus ۵۹.۱%, P-value=۰.۰۳, OR=۲.۴۲, ۹۵%CI=۱.۰۵-۵.۵۹). No significant differences were found in the genotypes and haplotypes distributions between the cases and controls. A high degree of linkage disequilibrium was observed between two polymorphisms. Conclusion: As the first study dealing with -۲۳۸۳ C/T and IVS۹+۴۵۹ T/C in lung cancer, our data conclusively suggest the association of -۲۳۸۳ T allele with susceptibility to lung cancer in Iranian population. The association of IVS۹+۴۵۹ T allele with susceptibility to lung cancer in old patients suggests the age-dependent effects of FOXP۳ gene on cancer occurrence.

کلمات کلیدی:

FOXP۳ gene, Gene polymorphism, Lung cancer, PCR-RFLP

لینک ثابت مقاله در پایگاه سیویلیکا: