GMR Genetics and Molecular Research
Online Journal
ISSN:1676-5680

Association between *ERCC1* and *XPF* polymorphisms and risk of colorectal cancer

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Genet. Mol. Res. 14 (1): 700-705 (2015)
Received November 26, 2013
Accepted October 1, 2014
Published January 30, 2015
DOI http://dx.doi.org/10.4238/2015.January.30.13

ABSTRACT. We conducted a hospital-based case-control study to evaluate the association between polymorphisms in excision repair cross-complementing group 1-xeroderma pigmentosum group F (*ERCC1-XPF*) variants and the risk of colorectal cancer in a Chinese population. Genotyping of the *ERCC1* rs2298881 and rs11615 and *XPF* rs2276466 polymorphisms were detected by polymerase chain reaction-restriction fragment length polymorphism. Colorectal cancer cases were more likely to be smokers, consume alcohol, have higher energy intake, and have a family history of cancer. Using conditional regression analysis, subjects carrying the *ERCC1* rs2298881CC genotype and C allele showed a significantly increased risk of colorectal cancer compared with those carrying the AA genotype. However, we found no association between the rs11615 and rs2276466 polymorphisms and the risk of colorectal cancer. In conclusion, the *ERCC1* rs2298881 polymorphism may be used as a predictive factor for determining the risk of colorectal cancer in a Chinese population. This finding may be

useful for identifying the genetic characteristics of colorectal cancer and developing more efficient strategies for prevention and treatment.

Key words: Colorectal cancer; Xeroderma pigmentosum group F; Genetic polymorphisms; Excision repair cross-complementing group 1

