451

SINGLE NUCLEOTIDE POLYMORPHISMS OF EXON 1 AND EXON 2 AND HAPLOTYPES OF MBL GENE (MBL_2) IN CHILDREN WITH REPEATED RESPIRATORY TRACT INFECTIONS IN CHINESE

C.Z. Hua[1], S.Q. Shang[2], H.M. Yu[2], Y.D. Wu[2], L.Q. Chen[2]

[1]Pediatric, Hangzhou Normal University, [2]Children's Hospital, Zhejiang University, Hangzhou, China

Background and aim: Mannose-binding lectin (MBL) is an important component of innate immunity. Eearlier studies have reported that low plasma MBL levels determined by the polymorphism of mbl_2, were more common in children with recurrent infections. However, seldom study covered the haplotypes and exon2. In this study, we investigated the single nucleotide polymorphisms and haplotypes of promoter , exon1 and exon2 in children with repeated respiratory tract infections.

Methods: MBL plasma concentrations were measured with ELISA method, and the polymorphism of mbl_2were determined with sequence analysis method.

Results: More individuals with low plasma MBL levels were found in RRTI group when compared with the healthy group.The varient allele frequencies of codon 54 in healthy group was 0.167 and in RRTI groups was 0.283, the difference was significent . No mutation was found at codon 52 and 57 . The varient frequencies at -550 and -221 sites in healthy children were 0.348 and 0.095 respectively, while in RRTI children, the frequencies were 0.542 and 0.117 instead. Less haplotypes of HYPA in RRTI group (0.463) was found when compared with the healthy group (0.619), while the frequency of LYPA was higher in RRTI group (0.256) than that in healthy group (0.114). Two heterozygous for T to A mutations at 84 codon and one heterozygous for G to A mutation at 101 codon in exon 2 were found in RRTI children.

Conclusion: Genotypes of mbl_2 resulting in low circulating MBL levels were associated with increased susceptibility to RRTI in Chinese children.