

Oral Abstracts

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[O25] ASSOCIATION OF TNF- α AND LYMPHOTOXIN- α GENE POLYMORPHISMS AND SUSCEPTIBILITY OF EXTREMITY CHRONIC OSTEOMYELITIS IN CHINESE POPULATION

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Aim: Previous studies have indicated that TNF- α and lymphotoxin- α (LTA) gene polymorphisms are involved in the pathogenesis of inflammatory diseases. However, potential associations of TNF- α and LTA gene polymorphisms with extremity chronic osteomyelitis remain unclear. This study aimed to investigate association of TNFA gene polymorphisms (rs1800629, rs361525, rs1799964, rs1800630, rs1799724 and rs1800750) and LTA gene polymorphism (rs909253) with the susceptibility of extremity chronic osteomyelitis in Chinese population.

Method: A total of 233 patients with extremity chronic osteomyelitis and 200 healthy controls were genotyped for the above 7 single-nucleotide polymorphisms (SNPs) in TNFA and LTA genes using the SNaPshot genotyping method.

Results: Significant difference was found regarding the genotype distribution of rs909253 between patients and healthy controls ($P = 0.002$). The mutant allele C frequency in rs909253 in patient group was significantly higher than that in control group ($P = 0.001$, OR = 1.57, 95% CI 1.200-2.054). In addition, significant associations were identified between rs909253 and the risk of developing chronic osteomyelitis by dominant model ($P = 0.025$, OR = 1.676, 95% CI 1.065-2.638), recessive model ($P = 0.001$, OR = 2.108, 95% CI 1.333-3.335) and homozygous model ($P = 0.001$, OR = 2.631, 95% CI 1.491-4.642) using the multiple logistic regression analysis. However, no significant associations were identified between TNFA gene polymorphisms (rs1800629, rs361525, rs1799964, rs1800630, rs1799724 and rs1800750) and the susceptibility of developing chronic osteomyelitis.

Conclusions: The present study suggests that LTA gene polymorphism rs909253 may participate in the pathogenesis of chronic osteomyelitis in Chinese population.