



Genetic linkage analysis of oral lichen planus in a Chinese family

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ABSTRACT. Oral lichen planus (OLP) is a common oral inflammatory disease affecting about 1-2% of the general adult population. As with European families who are diagnosed with OLP, the Chinese family who we studied was diagnosed with a severe form of oral reticular and erosive lesions; moreover, two of the five affected individuals developed oral cancer at an early age. A whole-genome genotyping scan with linkage analysis was performed using the 10K SNP array to investigate the genetic susceptibility of the Chinese family to OLP, which revealed one maximal nonparametric LOD score of 2.32 ($P = 0.0156$) for SNP marker rs2372736, defined at the chromosome 3p14-3q13 region encompassing 19 SNPs. Blood samples were obtained from 10 members of the family, which included the grandmother, father and mother, and the children altogether. The grandfather is dead, but the family members remembered he also suffered from the same disease. Chromosome 3p14-3q13 was identified as the candidate gene region for OLP; this information provides a foundation for further identification of the gene responsible for OLP.

Key words: Oral lichen planus (OLP); Linkage analysis; Chromosome 3