



*Case Report*

## ***SLC2A9* and *ZNF518B* polymorphisms correlate with gout-related metabolic indices in Chinese Tibetan populations**

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**ABSTRACT.** Current evidence suggests that heredity and metabolic syndrome contribute to gout progression. *SLC2A9* and *ZNF518B* may play a role in gout progression in different populations, but no studies have focused on the Tibetan Chinese population. In this study, we

determined whether variations in these 2 genes were correlated with gout-related indices in Chinese-Tibetan gout patients. We detected 6 single nucleotide polymorphisms in *SLC2A9* and *ZNF518B* in 319 Chinese Tibetan gout patients. One-way analysis of variance was used to evaluate the polymorphisms' effects on gout based on mean serum levels of metabolism indicators. Polymorphisms in *SLC2A9* and *ZNF518B* affected multiple risk factors related to gout development. Significant differences in serum triglyceride levels and high-density lipoprotein-cholesterol level were detected between different genotypic groups with *SLC2A9* polymorphisms rs13129697 (P = 0.022), rs4447863 (P = 0.018), and rs1014290 (P = 0.045). Similarly in *ZNF518B*, rs3217 (P = 0.016) and rs10016022 (P = 0.046) were associated with high creatinine and glucose levels, respectively. This study is the first to investigate and identify positive correlations between *SLC2A9* and *ZNF518B* gene polymorphisms and metabolic indices in Tibetan gout patients. We found significant evidence indicating that genetic polymorphisms affect gout-related factors in Chinese Tibetan populations.

**Key words:** Gout; Metabolic indices; Single nucleotide polymorphism; *SLC2A9*; *ZNF518B*