Investigation on the association between \textit{NLRP3} gene polymorphisms and susceptibility to primary gout

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Received August 10, 2015
Accepted October 25, 2015
Published December 9, 2015
DOI http://dx.doi.org/10.4238/2015.December.9.10

**ABSTRACT.** We conducted a case-control study to investigate the association between 3 common \textit{NALP3} polymorphisms (rs10754558, rs7512998, and rs12137901) and the susceptibility to primary gout. A total of 320 patients with primary gout and 320 controls were included in this study. The genotyping of \textit{NALP3} rs10754558, rs7512998, and rs12137901 were conducted by polymerase chain reaction-restriction fragment length polymorphism. Comparison analysis showed that primary gout patients were more likely to have higher body mass index, prevalence of hypertension, blood glucose, triglycerides, urea nitrogen, and uric acid ($P < 0.05$). Logistic regression analysis revealed no significant association between the \textit{NALP3} rs10754558, rs7512998, and rs12137901 polymorphisms and the risk of gouty arthritis. In conclusion, we found no significant association between \textit{NALP3} gene polymorphisms and the risk of primary gout.

**Key words:** \textit{NLRP3}; Polymorphism; Primary gout