Evaluation of IL-17A and IL-17F genes polymorphism in Iranian dyspeptic patients


Abstract:
Helicobacter pylori (H. pylori) colonize the gastric mucosa of approximately 50% of the world's population that involved in chronic gastritis. The relationship between Hp colonization and gastric inflammation is widely accepted. Polymorphisms in inflammation related genes such as cytokines were thought to partly determine the outcome of Hp infection and progression of gastritis. Interleukin IL-17A and IL-17F are inflammatory cytokines expressed by a novel subset of CD4+ Th cells, play important function in inflammation. Aimed: we evaluate association of IL-17A G197A and IL-17F A7488G polymorphisms with gastritis, Polymorphonuclear (PMN) and Monoculear (MN) infiltration in related to Hp. Methods: According to rapid urease test, PCR 16srRNA, urea and histological examination of biopsies, patients were classified Hp-infected and Hp-uninfected. The histological severity of gastritis was graded from normal to severe based on the degree of MN cell and PMN leukocyte infiltration, chronic gastritis and chronic active gastritis. Polymorphism in IL-17A G197A and IL-17F A7488G were evaluated by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP). Results: AG, GG, AG/AA carriers of IL-17A G197A and AA, GA, GG, GA/GG carriers of IL-17F A7488G polymorphisms were not associated with MN infiltration, PMN infiltration, chronic gastritis and chronic active gastritis in Hp-infected and Hp-uninfected groups (ρ > 0.05). AA genotype of IL-17A G197A was related to chronic gastritis and PMN infiltration in Hp-uninfected group. Conclusion: IL-17A G197A substitution may be a risk factor for development gastritis in Hp-uninfected patients, also affect the pathway MN cell production pathways.