

## **Survey in Iran of clarithromycin resistance in *Helicobacter pylori* isolates by PCR-RFLP**

### **Abstract**

The aims of this study were to assess primary resistance of *H. pylori* strains isolated from adult patients of Ilam, Iran to antibacterial agents (amoxicillin, clarithromycin, metronidazole and tetracycline) and detection of clarithromycin, azithromycin, clarithromycin, metronidazole and tetracycline resistance by disc diffusion. Fifty biopsies were taken from gastric mucosa of the antrum and body regions of adult patients by gastroscopy, and were cultured on *Helicobacter pylori* selective medium. The susceptibility of *H. pylori* strains showed that 44, 6, 6, 4 and 16% were resistance to metronidazole, amoxicillin, tetracycline, azithromycin, and clarithromycin, respectively. Polymerase chain reaction- restriction fragment length polymorphism analysis showed that all clarithromycin resistance isolates had A2143G mutation and PCR amplicons from these strains upon digestion by BsaI restriction enzyme resulted in 319 and 106 base pair fragments. Because most of physicians in Ilam do not use amoxicillin in triple therapy of *H. pylori* infection, isolates showed low rate of resistance to amoxicillin.

**Keyword:** Clarithromycin resistance; *H.pylori*; PCR-RFLP; Iran