中文題目: 幽門螺旋桿菌的殺菌率與 Clarithromycin 抗藥性的 MIC 值的關係

英文題目: The relation of MIC value of Clarithromycin resistance to successful eradication rate of *Helicobacter pylori*

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Background: Increasing Clarithromycin resistance rate is crucial factor to induce decreasing *Helicobacter pylori (Hp)* eradication rate. In Taiwan, resistance of clarithromycin is defined as minimal inhibitory Concentration (MIC)>1 mg/L in general clinical practice. However, we could find high successful eradication rate of *Hp* even MIC>1 mg/L of clarithromycin within result of Epsilometer test (E-test). In this study, we would evaluate the effect of higher MIC value to successful eradication rate of *Hp* and if definitive threshold of resistance could be raised to change in therapeutic practice of *Hp* eradication.

Materials and Methods: We retrospectively investigated the chart records of 242 patients in Kaohsiung Medical University from 2003 to 2015. The inclusion criteria included those who had received esophagogastroduodenoscopy examination and ^{13}C-urea breathe test (UBT) to confirm the status of H. pylori. Clarithromycin (Cla) resistance was detected by E-test, and detail graduate is recorded by Manufacturers design. We also use statistical method (Chis-square test and ANOVA, SPSS software) to evaluate different MIC value of E-test and correlation of successful eradication rate.

Results: A total of 242 patient all received *Hp* eradication regimen and followed culture/UBT and E-test after endoscopy specimen biopsy. We could find different MIC value of Clarithromycin strain induced different eradication rate as >1mg/L:61.5%, >1.5mg/L:61.5%, >2mg/L:62.5%, >3mg/L:58.4%, >4mg/L:55.2%, >6mg/L: 51.6%, >8mg/L:54.0%,>12mg/L:61.5%, >16mg/L:38.5%,>24mg/L:26.3%,>48mg/L:33.3%, >128mg/L:61.5% and >256mg/L:38.4%. We observe obvious turning point to declined eradication rate from MIC>3mg/dl without statistical significance (p=0.679) but MIC>8mg/dl of E-test, higher correlation of failure eradication of *Hp* with significance (p=0.017,<0.05) is found. Besides, higher proportion of MIC values is located between >1.5 mg/L to >3 mg/L.

Conclusion: In our study, we could find higher resistance to antibiotics (higher MIC values) has affected the eradication success rate. As usual, we defined Clarithromycin resistance threshold as >1 mg/L, but we show different view to change this definition according to our result of higher MIC value (>3 mg/dl) may another important value to evaluate if we would collect more case and studies in the future.