

## EFFECT OF METRONIDAZOLE AND CLARITHROMYCIN RESISTANCE ON HELICOBACTER PYLORI ERADICATION

In a region with a high prevalence of metronidazole-resistant (MtzR) strains of *Helicobacter pylori*, researchers investigated the effect of pretreatment MtzR and clarithromycin resistance (ClaR) on the eradication rate for omeprazole-clarithromycin-metronidazole triple-therapy and on the development of post-therapy resistance. 196 *H. pylori* isolates were recovered from patients with duodenal ulcer (n = 83), gastric ulcer (n = 9), and nonulcer dyspepsia (n = 104) during upper endoscopy. Pretreatment prevalence rates for MtzR, ClaR, and dual resistance were 37.8%, 13.8%, and 8.7%, respectively. Multiple logistic regression analysis revealed that younger age (< 40 years; odds ratio [OR], 3.25 [95% confidence interval [CI], 1.26–8.38]; *P* = .015), MtzR (OR, 3.04 [95% CI, 1.21–7.61]; *P* = .018), ClaR (OR, 5.78 [95% CI, 1.98–16.9]; *P* = .001), and the diagnosis of nonulcer dyspepsia (OR, 2.79 [95% CI, 1.03–7.60]; *P* = .044) were independent factors for pretreatment failure. The prevalence rates for posttreatment MtzR, ClaR, and dual resistance were 88%, 88%, and 75%, respectively. MtzR and ClaR significantly affected the success of eradication therapy. Posttreatment therapy resistance rates were high and related to the presence of pretreatment antibiotic therapy.

Wong WM, Gu Q, Wang WH, et al. Effects of primary metronidazole and clarithromycin resistance to *Helicobacter pylori* on omeprazole, metronidazole, clarithromycin triple-therapy regimen in a region with high rates of metronidazole resistance. *Clin Infect Dis* 2003;37:882–9.

## PROTEASE INHIBITOR USE AND INCREASED CARDIOVASCULAR RISK IN HIV PATIENTS

The authors performed a literature review of studies evaluating cardiovascular risk factors and events in patients receiving highly active antiretroviral therapy with and without protease inhibitor (PI) use. Included studies had a population of 25 or more patients; a follow-up period for patients taking PIs or a duration of PI therapy of 48 weeks or more (except in observational studies); and statistical analysis of relevant outcomes between groups who did and did not receive PIs. Studies that examined HIV in children, maternal-fetal HIV transmission, and PI therapy during pregnancy were excluded. 71 studies were included (14 randomized controlled trials, 6 observational studies, 37 2-group studies, and 19 1-group studies; an additional 5 trials were assessed separately for clinical endpoints). In studies examining the effects of PI therapy on cholesterol levels, 36 (75%) of 48 trials demonstrated worsening in total cholesterol levels, 35 (73%) of 48 trials revealed worsening triglyceride levels, 4 (40%) of 10 trials showed worsening in high-density lipoprotein levels, and 12 (100%) of 12 trials showed worsening

in low-density lipoprotein levels. Of the 19 studies assessing the effect of PI therapy on hyperglycemia or diabetes mellitus, 11 (58%) reported worsening in the PI group. Seven (88%) of 8 trials measuring carotid intima thickness or atherosclerotic lesions reported worsening in the PI group. Of the 3 studies evaluating the effect of PI on endothelial dysfunction, 2 (67%) trials reported worsening. Of the 3 studies evaluating the effect of PI on myocardial infarction, 2 (67%) trials reported worsening. Use of PI therapy should be balanced against long-term risks of cardiovascular disease.

Rhew DC, Bernal M, Aguilar D, et al. Association between protease inhibitor use and increased cardiovascular risk in patients infected with human immunodeficiency virus: a systematic review. *Clin Infect Dis* 2003;37:959–72.

## WEST NILE VIRUS TRANSMISSION THROUGH BLOOD TRANSFUSIONS IN 2002

Investigators reported their findings on patients whose West Nile virus (WNV) illness was temporally associated with receipt of blood transfusion or blood components during the 2002 WNV epidemic in the United States. From August 28, 2002 to April 15, 2003, patients with suspected WNV due to blood transfusion were identified. Of the 61 patients with suspected WNV, 23 were confirmed to have WNV through transfused leukoreduced and nonleukoreduced red cells, platelets, or fresh-frozen plasma. Ten (43%) patients were immunocompromised, and 8 (35%) were age 70 years or older. Immunocompromised recipients had longer incubation periods than those who were not immunocompromised or those infected in the community. Sixteen donors were linked to the 23 transfusion recipients through evidence of viremia. Nine donors reported viral symptoms preceding or following donation, 5 were asymptomatic, and 2 were lost to follow-up. Multivariate analysis revealed that fever (adjusted odds ratio [aOR], 31.0 [95% CI, 8.8–109.5]), new rash (aOR, 11.0 [95% CI, 1.9–65.3]), and painful eyes (aOR, 4.6 [95% CI, 1.04–20.5]) were independently associated with being an implicated donor with viremia. All 16 donors were negative for WNV-specific IgM antibody. Because WNV can be transmitted through blood products, donors should be screened for WNV using nucleic acid-based assays to reduce the risk of infection.

Pealer LN, Marfin AA, Petersen LR, et al. Transmission of West Nile virus through blood transfusions in the United States in 2002. *N Engl J Med* 2003;349:1236–45.

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