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ANTIMICROBICI

COMPARISON OF TRENDS IN ANTIBIOTIC RESISTANCE AND ERADICATION RATES IN H PYLORI STRAINS ISOLATED BETWEEN 2009 AND 2019

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INTRODUZIONE

The increasing prevalence of strains resistant to antimicrobial agents is a critical issue for the management of Helicobacter pylori (Hp) infection. This study observes the trend of the antimicrobial resistance and its reflection on the eradication rates during the last decade.

METODI

Consecutive 3935 Hp positive dispeptic patients, referred to our Unit from January 2009 to January 2019 to perform an upper GI endoscopy, were considered in this study. Naïve patients were treated with sequential therapy according to the Maastricht V consensus guidelines. Non-naïve patients were treated with therapies based on antibiogram results. Naïve patients referring a massive past use of antibiotics for infections other than Hp (especially of macrolides and quinolones) were treated as the non-naïve patients. Each patient was subjected to urea breath test (13C-UBT) to detect Hp infection prior to the upper GI Endoscopy, during which multiple antrum biopsies were taken to perform rapid urease test (RUT), culture/drug susceptibility test (E-test method vs clarithromycin, metronidazole, levofloxacin), and histopathological examination. Statistical analysis was performed with MedCalc19.1.

RISULTATI

Data collected from 2009-2014 were compared to those collected from 2015-2019 to analyze resistance and eradication rates trends in the two five-years periods . 2089 patients underwent endoscopy between 2009-14: 775 male, 1314 female, age range 18-96 years, 1394 naïve and 695 non-naïve. 1846 patients underwent endoscopy between 2015-19: 659 male, 1188 female, age range 18-92 years, 1348 naïve and 498 non-naïve. The endoscopic findings showed a prevalence of antral gastritis (78.6%) followed by duodenal ulcer or erosions (6.1%), gastric ulcer or erosions (4.5%), MALT (1%) and cancer (0.6%). Other pathologies, such as esophagitis, polyposis, and gastropathies (alone or in combination with the above-mentioned) were reported in 11.6% of cases.During 2009-14 1834 antibiograms were available and 1434 during 2015-19. Antibiotic resistance rates of Hp strains from naïve and non-naïve patients observed in 2009-14 and 2015-19 show an increasing trend of resistance to Clarithromycin in naïve patients (from 33.2% to 37.6%) and in both naïve (from 25.3% to 33.3%) and non-naïve (from 45.7% to 47.7%) to Levofloxacin. In naïve patients a clear increase (although not statistically significant yet) of Levofloxacin and Clarithromycin resistance emerged. Data obtained in 2009-14 and 2015-19 in naïve and non-naïve patients reveal a decreasing trend in eradication rates especially for Sequential therapy and Prixar therapy.
Eradication rate 2009-14 vs 2015-19
Sequential naïve: 94,8% PP 89%ITT vs 86,7%PP- 70.5% ITT
Sequential non-naïve: 71,7%PP- 69,5%ITT vs 57.4%PP 48,2%ITT
Prixar naïve: 95,1%PP 93,5%ITT vs 81,8%PP, 78,2%ITT
Prixar non-naïve: 89% PP 84,6%ITT vs 76,2%PP 64,4%ITT

CONCLUSIONI

Eradication rates for Sequential therapy in naïve patients and Prixar therapy both in naive and non-naïve patients had a statistically significant decrease. This data is in concordance with the resistance rate trends obtained. We also observed that this is more likely to happen in naïve patients so it could be related to a generic abuse of antibiotics . Moreover, a non-statistically significant data in the resistance rate analysis turns into a statistically significant outcome regarding the treatment failure.