Prevalence of Helicobacter pylori and Antibiotic Resistance in An Aboriginal Population in Canada’s Arctic: Preliminary Results from the Aklavik H. pylori Project

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Background: The rate of gastric cancer in the Northwest Territories Aboriginal population is higher than in the rest of Canada. The aim of this study was to determine the prevalence of Helicobacter pylori (Hp) and antibiotic resistance patterns. Methods: A community health project focused on Hp risks, including urea breath test (UBT) screening, was undertaken for 186 Aboriginal residents of Aklavik, a remote town of 620 inhabitants in the Northwest Territories of Canada, were invited to undergo endoscopy in February 2008. An on-site unit was assembled in the local health centre to perform upper gastrointestinal endoscopy with gastric biopsies for Hp culture and antibiotic susceptibility. Positive Hp cultures were tested using the E-test method for susceptibility to metronidazole, clarithromycin, amoxicillin, ciprofloxacin, tetracycline, nitrofurantoin and rifampicin. Results: A total of 240 residents (49% females, median age 51 [18-78] years) were included. Hp culture results were obtained from 170. 117 (69%) were Hp positive. Antibiotic resistance was found in 33 (n = 33) of 99 Hp-positive cultures tested. Resistance to metronidazole, clarithromycin, or amoxicillin was present in 23% (n = 23); 4% (n = 4), 0% (n = 0), respectively. There were no cases of resistance to rifampicin, amoxicillin, tetracycline, and metronidazole: A 7-day course of sodium rabeprazole 10 mg b.i.d., amoxicillin 250 mg b.i.d. and metronidazole 250 mg b.i.d. (rabeprazole group) or a 7-day course of lansoprazole 10 mg t.i.d., amoxicillin 750 mg b.i.d., and metronidazole 250 mg b.i.d. (lansoprazole group) were compared. Eradication was assessed for each group by 13C urea breath test at 6 weeks after completing eradication therapy. Drug susceptibility test was performed using 40 strains in pretreatment to amoxicillin, clarithromycin and metronidazole. Prior to second-line H. pylori eradication, the rate of resistance to clarithromycin was high at 82.5% (33/40). Similarly, resistance to metronidazole was low at 2.5% (1/40), however, no amoxicillin-resistant strains were found. The eradication rates for both lansoprazole group and rabeprazole group were high at 90% (36/40) and 100% (25/25), respectively. Conclusions: Lansoprazole plus metronidazole-amoxicillin as second-line therapy provided a high eradication rate and safe treatment similar to sodium rabeprazole-amoxicillin-metronidazole therapy. Lansoprazole-based eradication therapy is therefore considered significant for patients whom proton pump inhibitors are unsuited and also anticipated to reduce health-care costs in Hp pylori eradication.

Impact of Efficacies of Triple Therapy Using Lutfadine Plus Amoxicillin-Metronidazole for Proton Pump Inhibitor-Amoxicillin-Clarithromycin Treatment Failures for Helicobacter pylori Infection

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Background: The failure of first-line anti-Helicobacter pylori (H. pylori) therapies consisting of a proton pump inhibitor (PPI), amoxicillin, and clarithromycin is increasing due to primary antibiotic resistance. In Japan, only the following regimen: A 7-day course of proton pump inhibitor-amoxicillin-metronidazole is recommended as second-line H. pylori therapy and covered by the national health insurance. Lansoprazole is H2-receptor antagonist with gastroprotective action through capsaicin-sensitive afferent neurons and relatively inexpensive compared to PPI. Of all eligible participants, 39% (n = 194) underwent endoscopy and biopsies for culture, with Hp-positive residents more likely to consent to endoscopy. The mean (SD) age of the participants was 40 (±19) years and 55% were female. Hp culture results were obtained from 170. 117 (69%) were Hp positive. Antibiotic resistance was found in 33 (n = 33) of 99 Hp-positive cultures tested. Resistance to any of the agents tested was present in 23% (n = 23); 4% (n = 4), 0% (n = 0), respectively. There were no cases of resistance to rifampicin, amoxicillin, tetracycline, and metronidazole: A 7-day course of sodium rabeprazole 10 mg b.i.d., amoxicillin 250 mg b.i.d. and metronidazole 250 mg b.i.d. (rabeprazole group) or a 7-day course of lansoprazole 10 mg t.i.d., amoxicillin 750 mg b.i.d., and metronidazole 250 mg b.i.d. (lansoprazole group) were compared. Eradication was assessed for each group by 13C urea breath test at 6 weeks after completing eradication therapy. Drug susceptibility test was performed using 40 strains in pretreatment to amoxicillin, clarithromycin and metronidazole. Prior to second-line H. pylori eradication, the rate of resistance to clarithromycin was high at 82.5% (33/40). Similarly, resistance to metronidazole was low at 2.5% (1/40), however, no amoxicillin-resistant strains were found. The eradication rates for both lansoprazole group and rabeprazole group were high at 90% (36/40) and 100% (25/25), respectively. Conclusions: Lansoprazole plus metronidazole-amoxicillin as second-line therapy provided a high eradication rate and safe treatment similar to sodium rabeprazole-amoxicillin-metronidazole therapy. Lansoprazole-based eradication therapy is therefore considered significant for patients whom proton pump inhibitors are unsuited and also anticipated to reduce health-care costs in Hp pylori eradication.

Regression of Atrophy in Patients with Atrophic Body Gastritis Following Helicobacter pylori Treatment: Occurrence and Predictor Factors

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Regression of atrophy following Helicobacter pylori (H. pylori) eradication treatment in patients with atrophic body gastritis (ABG) is now possible in 5 minutes or less and may streamline flow through endoscopy units. A New 5 Minute Rapid Urease Test Is Superior to the CLO Test in the Diagnosis of H pylori Infection

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BACKGROUND: In clinical practice the only limitation in the use of the Rapid Urease Test (RUT) is the time required (from 1-24 hours) for the result. The aim of this study was to assess the accuracy of a new rapid and easy to perform RUT in the diagnosis of Hp pylori infection.

Methods: A total of 375 consecutive untreated ABG patients with upper GI symptoms were enrolled in the study. The Hp pylori infection was diagnosed by Urea breath test (UBT) alone was positive (in accordance with European Guidelines). 160 out of 375 (42.7%) patients were infected with H pylori and 135 were considered infected with H pylori if both histology and UBT were positive or if culture and at follow-up (median follow-up of 3 [0.5-16.5] years). Results: After Hp eradication of a proton pump inhibitor (PPI), amoxicillin and clarithromycin is increasing due to primary antibiotic resistance in Japan. Only the following regimen: A 7-day course of proton pump inhibitor-amoxicillin-metronidazole is recommended as second-line H. pylori therapy and covered by the national health insurance. Lansoprazole is H2-receptor antagonist with gastroprotective action through capsaicin-sensitive afferent neurons and relatively inexpensive compared to PPI. Of all eligible participants, 39% (n = 194) underwent endoscopy and biopsies for culture, with Hp-positive residents more likely to consent to endoscopy. The mean (SD) age of the participants was 40 (±19) years and 55% were female. Hp culture results were obtained from 170. 117 (69%) were Hp positive. Antibiotic resistance was found in 33 (n = 33) of 99 Hp-positive cultures tested. Resistance to any of the agents tested was present in 23% (n = 23); 4% (n = 4), 0% (n = 0), respectively. There were no cases of resistance to rifampicin, amoxicillin, tetracycline, and metronidazole: A 7-day course of sodium rabeprazole 10 mg b.i.d., amoxicillin 250 mg b.i.d. and metronidazole 250 mg b.i.d. (rabeprazole group) or a 7-day course of lansoprazole 10 mg t.i.d., amoxicillin 750 mg b.i.d., and metronidazole 250 mg b.i.d. (lansoprazole group) were compared. Eradication was assessed for each group by 13C urea breath test at 6 weeks after completing eradication therapy. Drug susceptibility test was performed using 40 strains in pretreatment to amoxicillin, clarithromycin and metronidazole. Prior to second-line H. pylori eradication, the rate of resistance to clarithromycin was high at 82.5% (33/40). Similarly, resistance to metronidazole was low at 2.5% (1/40), however, no amoxicillin-resistant strains were found. The eradication rates for both lansoprazole group and rabeprazole group were high at 90% (36/40) and 100% (25/25), respectively. Conclusions: Lansoprazole plus metronidazole-amoxicillin as second-line therapy provided a high eradication rate and safe treatment similar to sodium rabeprazole-amoxicillin-metronidazole therapy. Lansoprazole-based eradication therapy is therefore considered significant for patients whom proton pump inhibitors are unsuited and also anticipated to reduce health-care costs in Hp pylori eradication.