PP-088 **Association of *Helicobacter pylori* infection with gastroduodenal diseases in Nepal**

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Background: *Helicobacter pylori* (*H. pylori*), a Gram-negative bacteria, localizes in stomach and duodenum causes various upper gastrointestinal (UGI) disorders, which is more frequent in developing countries. Excessive suppression of gastric acid is the cause of the severity of gastritis due to *H. pylori*. The objective of the study was to determine the role of *H. pylori* in gastroduodenal diseases and functional dyspepsia among the Nepalese population.
Methods: A prospective study was carried at Om Hospital and Research Center, Kathmandu, Nepal, from February 2007 to May 2008. 173 patients with dyspepsia were consecutively examined using UGI endoscopy. Data analyzed included demographic details, clinical indications for the examination, endoscopic findings and results of the histopathology for *H. pylori*. 61% cases were female.
Results: Out of 173 patients, 113 (65.31%) had chronic gastritis, 43 (24.85%) had duodenal ulcer, 11 had gastric ulcer, 2 had gastric adenoma, and remaining had no pathology. 81 (71.68%) of chronic gastritis cases, 42 (97.67%) of duodenal ulcer cases, 7 (63.6%) of gastric ulcer cases, and all of 2 gastric adenoma cases had *H. pylori*. Overall prevalence of H. pylori among dyspepsia patients was 76.3% (132/173) with male to female ratio1:1.23 and mean age 41±15.2years. Among *H. pylori* infected 52.27% were smokers and 26.51% were alcoholic.
Conclusion: The result showed that Nepal also has high prevalence of *H. pylori* as other south Asian countries. Previous diagnosis and treatment of *H. pylori* will help to decrease mortality, morbidity of peptic ulcer, and gastric carcinoma which are big burden (from health and economic point of view) in a poor country like Nepal.

PP-089 **A new ultra short regimen with dexlansoprazole, moxifloxacin, amoxicillin, nitazoxanide, and doxycycline (DeMAND) in eradication of *Helicobacter pylori*: an open-label randomized clinical trial**

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Objectives: Treatment failure for *Helicobacter pylori* (HP) is due to antimicrobial resistance and recrudescence. Traditional approach with multi-antimicrobials is complex, with long duration of therapy, resulting in poor compliance and numerous side effects. A newer therapeutic paradigm is evolving with shorter durations, salvage therapies, and sequential regimens. This study utilizes an ultra-short regimen for better compliance, minimal side effects and similar efficacy.
Methods: Seventy-five (n = 75) dyspeptic patients of diverse ethnicity, mean age 36 years, underwent upper endoscopy with four quadrant antro-gastric biopsies with positive PCR and stool antigen for HP. All were randomized into three arms: DeMAND (n = 25): Dexlansoprozole 60mg, Moxifloxacin 400mg, Amoxicillin 1g, Doxycycline 100 mg daily and Nitazoxanide 500mg BID for four days; LOAD (n = 25): Levofloxacin 250mg, Omeprazole 40mg, and Doxycycline 100mg daily, with Alinia (nitazoxanide) 500mg BID for seven days; LAC (n = 25) with a standard regimen of Lansoprazole 15mg, Amoxicillin 1g, Clarithromycin 500mg BID for seven days. Exclusion: active bleeding, pregnancy, antimicrobial hypersensitivity, and use of antisecretory and antimicrobials within eight weeks.
Results: 68/75 patients (90.7%) completed the study with seven (9%) dropouts. Side effects were minor rash, dizziness, bloating, diarrhea, and palpitations. The ITT analysis for 30 days post-therapy HP stool antigen test was negative in 19/25 patients (76%) for DeMAND, 22/25 (88%) for LOAD, and 18/25 (72%) for LAC, there was no significant difference in eradication rate amongst all groups ($\chi^2 = 2.1$, $p = 0.36$). Per-protocol analysis revealed no difference ($\chi^2 = 2.4$, $p = 0.30$) in eradication rate amongst DeMAND (19/23; 82.6%), LOAD (22/23; 95%), or LAC (18/22; 81%).
Conclusions: The 4-day DeMAND regimen is well-tolerated and clinically comparable to LOAD and LAC therapy for the eradication of *H. pylori*. This novel ultra-short therapy may provide an additional cost benefit as well as patient acceptance. A larger trial warrants validation.

PP-090 **A comparison of real-time PCR and PCR-RFLP methods for simultaneous identification of *Helicobacter pylori* and clarithromycin resistance point mutations**

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Background: Currently, a seven-day, triple-drug regimen has been recommended as one of the first-line therapies for *H. pylori* management of which clarithromycin is a key component. However, this therapy is being investigated because of the increased eradication failures due to the prevalence of clarithromycin resistant *H. pylori* infections. The aim of this study is to compare two fast and direct diagnostic methods to evaluate clarithromycin resistance in gastric biopsy specimens.
Methods: This cross-sectional descriptive study was performed on 200 antral gastric biopsy specimens which were obtained from patients undergoing upper gastrointestinal tract endoscopy in Hajar hospital of Shahrekord, Iran. Initially, *H. pylori* strains were identified by RUT. Then, analysis for clarithromycin resistance was performed with specific primers HP23S1 and HP23S2 for 23S rRNA gene and probe Pwt for clarithromycin sensitive strain and probe P44G, P43G, P43C and P42G for A2144G, A2143G, A2143C and A2152G mutations respectively by Real-time PCR assay. Also, A2142G and A2143G point mutations were detected by PCR-RFLP method.
Results: Out of 200 samples, 164 (82%) were *H. pylori* positive. Overall, a clarithromycin susceptible strains were detected in 105 (64.02%) patients and clarithromycin resistance strains were detected in 59 (35.98%) which were identified as 4 (2.44%) A2144G, 26 (15.85%) A2143G, 15 (9.15%) A2143C and 20 (12.19%) A2142G point mutations. Purely resistant strains were detected in 38 (23.17%), while a mixture of resistant and susceptible (heteroresistant) bacterial strains were found in the remaining 16 (9.76%) cases. Genotype of 5 (8.47%) strains were not detected. 39 (23.78%) resistant strains were detected by PCR-RFLP method which were identified as 15 (9.15%) A2143G, 15 (9.15%) A2142G and 9 (5.49%) mix strains.
Conclusion: Results showed that Real-time PCR assay, has enough sensitivity to simultaneously identification of *H. pylori* and clarithromycin resistance in short time.