

Low Dose, Short Term, Triple Therapy For Helicobacter Pylon Associated Peptic Ulcer

Pages with reference to book, From 228 To 230

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Abstract

To confirm the efficacy and tolerability of a new, low-dose, short-term triple therapy, 31 endoscopically diagnosed cases of peptic ulcer who were helicobacter pylori positive by brush cytology and urease test were inducted into the study. These patients were given lansoprazole 30 mg once a day, clarithromycin 250 mg twice a day and tinidazole 500 mg twice a day for one week only. Endoscopy, urease test and methylene blue test for helicobacter pylori were repeated four weeks after stopping the therapy. Ulcer healed in all the patients while helicobacter was eradicated in 90.3% of patients (JPMA 47:228, 1997).

Introduction

Helicobacter pylori (Hp) is probably the commonest infective organism in the world with an established role in chronic type B gastric and peptic ulcer¹. Many drug combinations are available now a days^{2,3}. Standard triple therapy using bismuth, metronidazole and tetracycline gives good eradication rates but the therapy is long and complicated³, moreover, the regimen is associated with significant side effects². The introduction of eradication regimens based on acid suppression in combination with antibiotics has yielded promising results^{2,4,5}. The combination of acid suppression with two antibiotics has provided better results³, with centers achieving eradication rates of over 80%^{2,6-8}. Considerable more work, however, is required to identify the ideal dosage and combination that will give the best eradication rates with the simplest regimen and fewest side effects. The present study was designed to confirm the efficacy and tolerability of a new, low dose short term triple therapy for treatment of Hp associated peptic ulcer in our settings.

Patients and Methods

Patients presenting with ulcer like symptoms underwent upper GI endoscopy using Fujinon F-7 endoscopic observing standard procedure and precautions⁹. Patients with peptic ulcer were selected for the trial. Tests for Hp were carried out in each case which included rapid urease test and brush cytology. Brush cytology was done using Teflon-sheathed re-usable brush. Sample from the brush was smeared on the slide, which was air dried and stained with 1% Methylene Blue. Slide was then observed by consultant pathologist under low power, high power and oil immersion lens for curved or 'S' shaped H?. Hp stains intense violet-blue with methylene blue staining. Only patients with Hp positive peptic ulcer were inducted in the study. All selected patients were given cap. lansoprazole 30 mg once after breakfast, tablet clarithromycin 250 mg twice a day and tablet tinidazole 500 mg twice a day for one week only. After 4 weeks, endoscopy, rapid urease test and brush cytology were repeated. Patients were asked to report any side effects experienced.

Results

Thirty-one patients with Hp-positive (brush cytology method) peptic ulcer were included in the trial after taking informed consent. There were 22 males and 9 females. Mean age was 29.4 ± 6.1 years. Twenty-four cases had duodenal ulcer and 7 had gastric ulcer. After taking the triple therapy for 7 days endoscopy was repeated at 4 weeks. It showed healing of ulcer in all patients. Hp done by brush cytology showed eradication in 28 patients (90.3%) while rapid urease test showed eradication in 29 (93.5%) patients. Only 2 (6.4%) patients reported metallic taste and nausea but were able to continue the therapy.

Discussion

Helicobacter pylori can be detected through a variety of invasive (urease testing, culture or histologic diagnosis of endoscopic biopsies) and non-invasive (urease breath tests, serologic tests) diagnostic tests. In our study we used a newly developed test for detection of Hp and found it to be sensitive and easy to perform. During follow-up endoscopy, one patient remained positive by this method in which urease test was negative thus showing a high sensitivity. In a recent report, brush cytology for detection of Hp, was shown to be significantly superior to culture, histology and urease testing⁹. The association of Hp in pathogenesis and treatment of peptic ulcer and chronic active type B gastritis is well established¹¹. There is no indication to treat patients who have *H. pylori* and non-ulcer dyspepsia or gastritis, because eradication does not reliably affect their symptoms. Current regimens for eradication include bismuth, antibiotics and anti-secretory agents. Complex and poorly tolerated regimens may no longer be necessary, as simpler regimens appear to be as effective and better tolerated. In a recent study, combination of omeprazole with amoxicillin showed 72%¹² cure, while in another study combination of clarithromycin with omeprazole and metronidazole gave 88% cure⁶. We in one of our previous works have shown that the combination of nizatidine with clarithromycin gave 95.2% healing⁷. Many new combinations are being tried world over, stress being laid down to develop combinations which would be of short duration, low in dosage and effective in eradicating Hp and healing the ulcer. Recently a new low dose, short term triple therapy using omeprazole 20 mg b.i.d., clarithromycin 250 mg b.i.d. and tinidazole 500 mg b.i.d. for 7 days was evaluated and found to be very effective. Healing was reported in all the cases while Hp was eradicated in 93% of patients despite no further treatment¹³. In another study, two different short term low dose combinations were tried. These consisted of omeprazole 20 mg once in the morning and clarithromycin 250 mg and metronidazole 400 mg twice daily (OCM) for 7 days or with omeprazole 20 mg once in the morning and clarithromycin 250 mg and tetracycline 500 mg twice daily (OCD) for 7 days. Hp was treated successfully in 95% patients by OCM and in 65% patients by OCD combination¹⁴. The success of above combinations prompted us to conduct a trial using lansoprazole, clarithromycin and tinidazole in low dose for a short period of 7 days. The results obtained were very encouraging with 100% healing of ulcers and 90.3% eradication of Hp and these results matched with those from other centres^{13,14}. It is concluded that this low dose, short term triple therapy is very effective and well tolerated. The combination has few side effects and gave better compliance. The long term follow-up and relapse rate of these combinations remains to be seen by further studies.

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