Triple Therapy in Duodenal Ulcer Healing - A Follow Up Study

Pages with reference to book, From 194 To 195

Huma Qureshi, Waquaruddin Ahmed, S.J. Zuberi (PMRC Research Centre, Jinnah Postgraduate Medical Centre, Karachi.)

Abstract

Thirt-ynine Helicobacter pylori (HP) positive chronic duodenal ulcer patients completed the 4 weeks treatment of triple therapy (Denol, Metronidazole and Amoxil). Of these 29 showed healed duodenal ulcer and negative CLO test at S weeks (eradication). They were followed at 3,6 and 12 months and at each follow-up, endoscopy and CLO testing were repeated. At 12 weeks, 54% showed a healed ulcer and negative CLO and these figures reached to 69 and 66% at 6 and 12 months respectively. Thirty percent relapsed within 1 year. The present study indicates a prolonged remission of duodenal ulcer following HP eradication (JPMA 46:194, 1996).

Introduction

The most obvious disease associated with H. Pylori is peptic ulceration1, with over 90% of duodenal ulcers (DU) being caused by H. pylori. Atendoscopy, the simplest method ofdiagnosis of H. pylon is mucosal biopsy citherfor histology or for rapid urcase test (CLO test). Due to high cost of histology it is generally recommended that if CLO turns positive on the day of endoscopy, then histology should be discarded[1].

Therapy for H. pylori is generally not recommended unless a diagnostic test for H. pylori has been performed and found positive. Triple therapy (Denol. Amoxil, Mctmnidazole) is universally recommended instead of mono or dual therapy, because it eradicates approximately 50% of metronidazole resistant isolates, giving an ultimate cure rate of 85-90%. Cure is defined as failure to demonstrate H. pylori by a sensitive technique 4 weeks after the cessation of therapy. Reinfection is less than 1% perannurn in the west[2], but is more (18%) in children[3]. Reinfection is rare before 1 month. Most studies reported to date, have shown an improved ulcer healing and decreased relapse rate forDU in which H. pylori has been eradicated[1,4]. Overall, permanent DU cure rates of 90% are seen with 10% relapse rate due to either persistent acid hypersecretion or some undetermined permanent mucosal defect[5].

In Pakistan. using triple therapy in DU, an eradication rate of 81% was achieved with 18% non responders[6], but permanent cure rates following eradication are not known. The present study was done using serial endoscopies and biopsies (for histology and CLO test) to see the long term effect of H. P eradication on DU relapse.

Patients and Methods

Thirty-nine duodenal ulcer patients completing the helicobacter pylon (HP) eradication regimen with triple therapy comprising of tab Denol IxQID for 28 days, metronidazole 40() nigxtds and Amoxycilline 5(X) mgxtds for 14 days, were included in the study. All patients were followed without medication and endoscoped at 3,6 and 12 months and at each occasion 2 antral biopsy specimens were taken. One biopsy

was placed in the CLO gel[7], while other was placed in a separate container containmg 10% buffered formalin for histological assessment. Biopsy tissue was stained with haematoxylin and eosin to grade the severity of histological gastritis and the density of HP. Grading (from 1-3) was based on the density

of mononuclear cells (chronic gastritis). extent of neutrophil infiltration (active pstritis) and on density of h. pylori as previously described[8]. Ulcer staflis at each endoscopy was also documented. Depending upon the ulcer and CLO status patients were divided into 4 groups A: DU -ye, CLO -ye. B: DU -ye, CLO +ve. C: DU ±ve, CLO -ye. D: DU +ve, CLO +ve.
Patients falling into group B and D during follow-up were regarded as partial responders and were, therefore, excluded while those belonging to group A and C were followed to see the ultimate response. Chi square test was used for statistical evaluation.

Results

A total of 39 patients entered the study. There were 31 males and 8 females with a mean age of 37 years. Number of patients coming for follow up at 3,6 and 12 months and those showing healed ulcer and negative CLO is shown in the Table.

Table. Long term response to triple therapy.

Duration	Patients in follow-up	Lost to follow-up	Groups A (%)	C (5)	B+D
8 weeks	39	-	29 (74)	3 (37.6)	7
12 weeks	29	8	13 (54)	5 (21)	6
6 months	19	6	9 (69)	2 (15)	2
1 year	12	3	6 (66)	2 (22)	1

The ulcer healing rates with negative CLO (group A) were 54% at 12 weeks, 69% at 6 months and 66% at 1 year indicating a sustained healed ulcer status following H.P. eradication. Duodenal ulcer relapsed within 1 ear in 30% cases.
Before commencement of the therap. majority of patients on histology showed chronic atrophic gastritis (72%) with grade 3 histological gastritis and 2 to 3+ bacterial colonization of HP in the tissue. Post therapy and during Follow-up all patients in group A showed sustained cradicalion of H.P. and disappearance of gastritis. Non-responders showed reduction in HP colonization and histologic gastritis after treatment, but none cleared. Reduction in colonization of bacteria was assessed by the criteria i.e., bacteria which arc initially in clumps show scattered arrangement following therapy. During relapse most cases initially became CLO positive and later developed an ulcer.

Discussion

Duodenal ulcer healing and H.P. eradication rates following triple therapy in the present study were 74%. This figure is lower than 81% reported previously[6] and 95% reported from the west[1]. Keeping a high frequency of HP infection rate in the developing countries with a high antibiotic resistance rate[9], a 74% eradication achieved in the present is still very encouraging. Non-response in 18% cases in our previous study[6] suggests antibiotic resistance.
Sixty-six percent cases showed sustained ulcer healing till one year following H. pylori eradication.

The cost of triple therapy per patient was approximately Rs.l100; while the cost of H2 blockers for 4-8 weeks is approximately Rs.900, indicating that the long-term cost of peptic ulcertreatment can be significantly reduced by eradicating H.P. Duodenal ulcer relapse following a course of H2 blockers is about 70-90% within a year. but following H.P. eradication yearly relapse rate falls to about 5%or less[1]. In the presentstudy ulcerrelapse rate following HP eradication was 30%. Though most longitudinal studies show that the protection from ulcer relapse following HP eradication can extend to several years[4], but no solid data is yet available for such a finding in developing countries where the infection and reinfection rates are very high[10] and socioeconomic conditions are poor.

Till the time that oral H. pylori vaccine[1] becomes available in the developing countries, HP eradication with either conventional triple therapy or other 2-3 drug combina(ions including drugs like Bismith, amoxycilline, tetracycline and furazolidonc (HP is not resistant to these drugs) or proton pump inhibitors with one or two of the above antibiotics is the treatment of choice for HP associated duodenal ulcer.

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