What is the status of Sequential Therapy Versus Standard Triple-Drug Therapy in peptic ulcer disease in eradicating H pylori?

Sequential Therapy Versus Standard Triple-Drug Therapy for Helicobacter pylori Eradication

Prof. Khan Abul Kalam Azad

Professor of Medicine

WHY

- BACKGROUND : Antimicrobial resistance has decreased eradication rates for Helicobacter pylori infection worldwide.

- OBJECTIVE : To determine whether sequential treatment eradicates H. pylori infection better than standard triple-drug therapy for adults with dyspepsia or peptic ulcers.

STUDY

- DESIGN : Randomized, double-blind, placebo-controlled trial.
- SETTING: Two Italian hospitals between September 2003 and April 2006.
- PATIENTS : 300 patients with dyspepsia or peptic ulcers.
- FIRST PUBLISHED: Dino Vaira et al in Ann Intern Med. 2007 ; 146: 556-563.

STRENGTH OF RECOMMENDATION

- 1.Jafri NS et al. Meta-analysis: Ann Intern Med. 2008; 148:923-931.
- 2.Chey WD, Wong BC. American College of Gastroenterology guideline on the management of H.pylori infection. Am J Gastroenterol.2007;102
- 3. Malfertheiner P et al. Current concepts in the management of H. pylori infection: the Maastricht iii Consensus Report. Gut.2007.
- 4.Zullo D et al . A randomized trial. Ann Intern Med. 2007; 146

H. pylori Eradication

- Causes :

- Peptic ulcers
- Gastric mucosa- associated lymphoid tissue lymphoma
- Gastric cancer

Standard Treatments

- US & European authorities rely on CLARITHROMYCIN or METRONIDAZOLE in conjunction with OTHER ANTIBIOTICS and ACID INHIBITORS.

Present Scenario

- The prevalence of Clarithromycin and Metronidazole resistance has increased substantially in recent years , and there has been a corresponding decrease in the eradication rate for H. pylori infection.

Present Scenario

- Eradication rates in most western countries have declined to unacceptable levels.
  Eradication therapy fails in approximately 1 in 5 patients.

Present Scenario

- A simple, short treatment regimen that would return eradication levels to those seen at the advent of H.pylori treatment is urgently needed.

Present Scenario

- Such a regimen should have high efficacy against clarithromycin-resistant and metronidazole-resistant strains of H. pylori because these strains are increasingly encountered in routine clinical practice.

MEASUREMENTS

- 13urea breath test
- Upper GI endoscopy
- Histologic evaluation
- Rapid urease test
- Bacterial culture
- Assessment of antibiotic resistance

STANDARD THERAPY

- PPI for 7-10 days : Day 1-7or10th , and AMOXICILLIN or IMIDAZOLE plus CLARITHROMYCIN for 7-10 days: Day 1-7or 10th.

SEQUENTIAL THERAPY

- PPI for 10 days : Day 1-10th days
- AMOXICILLIN for 5 days : Day 1-5th days
- IMIDAZOLE plus CLARITHROMYCIN for next 5 days : Day 6-10th days.

RESULTS

- In ITALY, eradication rates of > 90% have been reported with a sequential therapy.
- META-ANALYSIS: 9 RCTs
  Pooled eradication rates were 93.4% for sequential therapy and
  76.9% for standard therapy.

RESULTS

- For every 6.3 patients treated with sequential therapy, there would be 1 additional cure compared to standard therapy.
- Adherence rates were similar in both groups (Median adh rate :seq vs stnd = 97.4% vs 96.8%).
- Reported side effects were similar in both groups.

CONCLUSION

- Sequential therapy is statistically significant.
- Sequential therapy is more effective in patients with clarithromycin-resistant strains.

- THANKS