VOLUME-8, ISSUE-2, FEBRUARY-2019 • PRINT ISSN No 2277 - 8160

Original Research Paper

Surgery

A COMPARATIVE STUDY OF OMEPRAZOLE VS RANITIDINE IN DUODENAL ULCER IN PMCH, PATNA

Aman Kumar	Department of Surgery, Patna Medical College & hospital, Patna
Ravindra Kumar*	Department of Surgery, Patna Medical College & hospital, Patna *Corresponding Author
MD. Adil	Department of Surgery, Patna Medical College & hospital, Patna
Pankaj Kumar	Department of Surgery, Patna Medical College & hospital, Patna

ABSTRACT Duodenal ulcer is most common disease worldwide. The mainstay of treatment of duodenal ulcer is suppression of acid secretion is thought to reduce the risk of ulcer. The treatment of acid peptic disorder (Duodenal ulcer being the most commonest) has passed through 2 major advances with advent of (1) H2 receptor antagonists by Sir james black (1972), (2) Omeprazole , the first gastric proton pump inhibitor which blocks the final common pathway (H+/K+ ATPase- proton pump) of acid secretion, irrespective of the stimulus on gastric parietal cells. In this series we studied 102 patients with use of ranitidine and omeprazole in PMCH,Patna and found that Omeprazole is a rational anti ulcer drug and is drug of 1st choice for refractory uncomplicated duodenal ulcer and ideal for duodenal ulcer in smokers and long term NSAID users.

KEYWORDS :

Introduction :

Duodenal ulcer is most common disease occurs on the inside of the upper portion of small intestine(duodenum). The most common causes of the ulcer is infection with the bacterium Helicobacter pylori and long term use of aspirin and nonsteroidal anti-inflammatory drugs NSAIDs.

The treatment of acid peptic disorder (Duodenal ulcer being the most commonest) has passed through 2 major advances with advent of (1) H2 receptor antagonists by Sir james black (1972), (2) Omeprazole , the first gastric proton pump inhibitor which blocks the final common pathway (H+/K+ ATPase- proton pump) of acid secretion, irrespective of the stimulus on gastric parietal cells. This resulted in sharp decline in cases requiring surgery. The present study is a comparative study of ranitidine and omeparzole in the treatment of duodenal ulcer.

Meaterial & method :

102 patients of endoscopically proved duodenal ulcer treated in surgery department of Patna medical college Hospital, Patna (from Nov.2015 to Apr.2017) were selected . 30 cases were given omeprazole 20 mg once daily before breakfast and rest 34 ranitidine 150 mg B.D for 1 month without dietery restrictions. They were assessed clinically after 2 and 4 weeks and endoscopically after 4 weeks.

Results :

Majority (93.6%) were males. Average age was 36.4 years (range 18-62 years) . 34 (53.1%) were smokers and 7 (10.9%) long term NSAID users. Average duration of symptoms was 2.4 years (range ¼ to 12 years) . Epigastric pain & burning , night pain were main symptoms. After 2 weeks, symptomatic relief were found in 56% & 86.6% cases with ranitidine and omeprazole respectively. After 4 weeks – 94% & 100 %. Endoscopic ulcer healing was 100% with omeprazole, 11.8 % ulcer did not healed with ranitidine.

Discussion :

Omeprazole is the latest anti-peptic ulcer drug. 76.5% cases on omeprazole & 56% on ranitidine became asymptomatic after 2 weeks which is similar to the reports of Mcfarland et al (1990) – 77% & 52% , co-operative study group (1990) -73.7% & 59% respectively. Failure of symptomatic relief in 5.9% cases with ranitidine after 4 weeks is similar to that reported by Joseph G.Y sung et al (2009). Omeprazole group showed 100% endoscopically healing rate which is comparable to healing rate to 97% of Bradhan et al. Endoscopic healing rates with ranitidine was 88.24% which is similar to co-operative study group (1990)-88%, Hiroaki nima et al (2010)-87%. All smokers in omeprazole study group showed complete healing while ranitidine failed to heal ulcers of 3 smokers & NSAID users. These factors are known to delay ulcer healing. Similar were the results of others. Adverse effects were less & insignificant with omeprazole than ranitine as found by Mcfarland (1990).

To conclude, Omeprazole is a rational anti ulcer drug and is drug of 1st choice for refractory uncomplicated duodenal ulcer and ideal for duodenal ulcer in smokers and long term NSAID users. More clinical triall is needed to establish it as 1st line in acid peptic diseases.

REFERENCES :

1. Joseph G.Y sung et al : Ann Intern Med. 2009;150(7):455-464
2. Hiroaki nima et al : World J Gastroenterol. 2010 November 14; 16(42): 5342–5346.
3. Co-oprative study group (1990) : Double blind comperative study of omeprazole and ranitine in patient with duodenal or gastric ulcer : A multi-center trial . Gut 31 : 653-656
4. McFarland et al (1990) : Omeprazole provides quicker symptom relief and duodenal ulcer healing than ranitidine : Gastroenterology , 98 :278 -2831. Paakkari H. Epidemiological and financial aspects of the use of non-steroidal anti-inflammatory analgesics. PharmacolToxicol 1994;75:Suppl 2:56-9.
5. Larkai EN, Smith JL, Lidsky MD, Graham DY. Gastroduodenal mucosa and dyspeptic symptoms in arthritic patients during chronic nonsteroidal anti-inflammatory drug use. Am J Gastroenterol 1987;82:1153-8.
6. Giercksky KE, Huseby G, Rugstad HE. Epidemiology of NSAID-related gastrointestinal side effects. Scand J GastroenterolSuppl 1989;163:38.
7. Walt R, Katschinski B, Logan R, Ashley J, Langman M. Rising frequency of ulcer perforation in elderly people in the United Kingdom. Lancet 1986;1:489-92.
8. Ivey KJ. Mechanisms of nonsteroidal anti-inflammatory drug-induced gastric damage: actions of therapeutic agents. Am J Med 1988;84:Suppl 2A:41-8.
9. Hogben CAM, Schanker LS, Tocco DJ, Brodie BB. Absorption of drugs from the stomach. II. The human. J PharmacolExpTher 1957;120:540-5.
10. Elliott SL, Ferris RJ, Giraud AS, Cook GA, Skeljo MV, Yeomans ND. Indomethacin damage to rat gastric mucosa is markedly dependent on luminal pH.ClinExpPharmacolPhysiol 1996;23:432-4.
11. Lancaster-Smith MJ, Jaderberg ME, Jackson DA. Ranitidine in the treatment of non-steroidal anti-inflammatory drug associated gastric and duodenal ulcers. Gut 1991;32:252-5.
12. Ehsanullah RS, Page MC, Tildesley G, Wood JR. Prevention of gastroduodenal damage induced by non-steroidal anti-inflammatory drugs: controlled trial of ranitidine. BMJ 1988;297:1017-21.
13. Robinson MG, Griffin JW Jr, Bowers J, et al. Effect of ranitidine on gastroduodenal mucosal damage induced by nonsteroidal antiinflammatory drugs. Dig Dis Sci 1989;34:424-8
14. Graham DY, Agrawal NM, Roth SH. Prevention of NSAID-induced gastric ulcer with misoprostol: multicentre, double-blind, placebo-controlled trial. Lancet 1988;2:1277-80.
15. Daneshmend TK, Stein AG, Bhaskar NK, Hawkey CJ. Abolition by omeprazole of aspirin induced gastric mucosal injury in man. Gut 1990;31:514-7.
16. Scheiman JM, Behler EM, Loeffler KM, Elta GH. Omeprazole ameliorates aspirin-induced gastroduodenal injury. Dig Dis Sci 1994;39:97103.
17. Walan A, Bader J-P, Classen M, et al. Effect of omeprazole and ranitidine on ulcer healing and relapse rates in patients with benign gastric ulcer. N Engl J

Med 1989;320:69-75.
18. Lauritsen K, Rutgersson K, Bolling E, et al. Omeprazole 20 or 40 mg daily for healing of duodenal ulcer? A double-blind comparative study. Eur J GastroenterolHepatol 1992;4:995-1000.
19. EEC note for guidance: good clinical practice for trials on medicinal products in the European community. PharmacolToxicol 1990;67:361-72.
20. Cullen DJ, Hawkey GM, Humphries H, et al. Role of non-steroidal anti-inflammatory drugs and Helicobacter pylori in bleeding peptic ulcer. Gastroenterology 1994;106:Suppl:A66.