



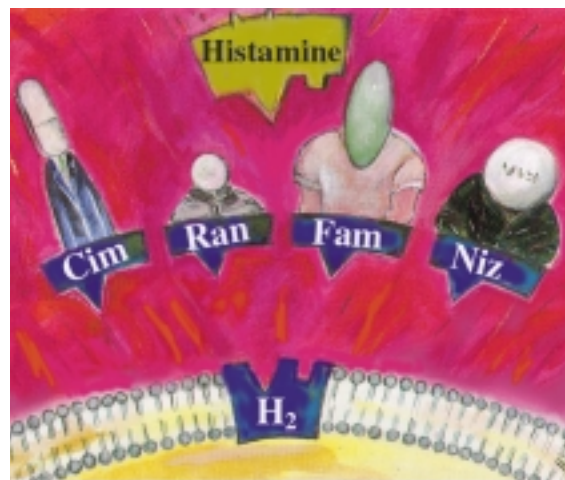
THERAPEUTICS INITIATIVE

Evidence Based Drug Therapy

Treatment of Non-Ulcer Dyspepsia in Adults: Common Questions about H₂-blockers

Complaints referable to the upper gastrointestinal tract are a common presentation to the primary care physician. We are fortunate to have a wide variety of drugs available to manage these conditions including antacids, H₂-blockers, sucralfate, misoprostol, and omeprazole. In this letter we will focus on the most widely prescribed drugs, the H₂-blockers. The next two letters will concentrate on *Helicobacter pylori* and gastroesophageal reflux disease.

There are four H₂-blockers available for prescription in British Columbia (see Table). These four drugs all act to reduce gastric acid secretion and are similar chemically and pharmacokinetically; they are all eliminated mostly by the kidney and they have similar half-lives of around 2 hours.¹ Despite the short half-life, **they are all effective in most patients when given once daily at bed-time.**¹ Administration of any of the four H₂-blockers results in healing after 8 weeks of therapy in 80% of the cases. The approximate clinically equivalent doses are shown in the Table reflecting some difference in potency, which is not of any clinical significance. The safety profile of all four drugs is excellent with a low percentage of patients developing side effects, requiring discontinuing the drug.¹



Commonly asked questions

- **What about confusion in the elderly?**

The outpatient incidence of CNS reactions including confusion is 0.2% or less. There is no evidence of a higher incidence with one H₂-blocker as compared with another.²

- **What about drug interactions?**

Cimetidine and to a lesser extent ranitidine have the capacity to inhibit the metabolism of some other drugs to a small usually clinically insignificant degree (10 to 30%). Cimetidine only needs to be avoided in combination with the following three drugs: warfarin, phenytoin, and theophylline.

- **What about gynecomastia?**

Cimetidine is associated with a 0.3% overall incidence of gynecomastia; the risk is less with doses less than 1000 mg daily.³

Drug	Trade Names	Dose*	
		Treatment 6-8 weeks mg qhs	Maintenance mg qhs
Cimetidine	Tagamet, Peptol, Nu-Cimet, Apo-Cimetidine, Novo-Cimetine	800	400
Ranitidine	Zantac, Nu-Ranit, Novo-Randine, Apo-Ranitidine	300	150
Famotidine	Pepcid, Apo-famotidine, Novo-famotidine	40	20
Nizatidine	Axid	300	150

* Reduce by at least one half in patients with renal insufficiency, e.g. many elderly patients.

• Is it possible to switch from one H₂-blocker to another?

Patients can be readily switched from one H₂-blocker to another in equivalent dose without any risk to the patient.

• How much should the dose be reduced in the elderly?

In the elderly and other patients with reduced renal function the doses used should be 1/2 to 1/4 of the usual doses.¹

• Is it safe to stop H₂-blockers in patients who have been on long term maintenance therapy?

Studies have shown that many patients are inappropriately maintained on H₂-blockers.⁴ Maintenance therapy should be limited to patients with proven recurrent peptic ulcer

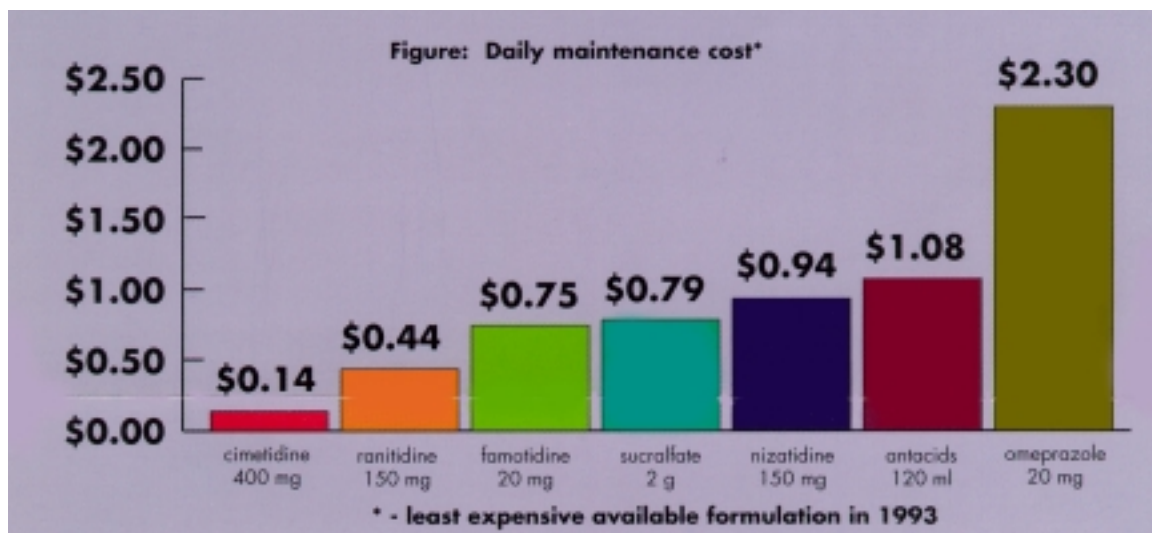
disease, or severe recurrent dyspepsia. The need for maintenance therapy will be markedly diminished with the appropriate eradication of *Helicobacter pylori* (see next Therapeutics Letter). It is safe to abruptly stop the drug in such patients. If a patient develops symptoms consistent with rebound hyperacidity the dose of the drug can be tapered over a 2-3 week period and stopped.

• Is there a significant difference in the cost of H₂-blockers?

The relative cost of the average maintenance dose of H₂-blockers in comparison to the other drugs used in the management of peptic ulcer disease is shown in the Figure.

Conclusion:

There is little difference between the various H₂-blockers other than cost.



References

1. Feldman M., Burton ME. *Histamine2 - receptor antagonists. Standard therapy for acid-peptic diseases.* New England Journal of Medicine 323:1672- 80, 1749-55; 1990
2. Cantú TG, Korek JS. *Central nervous system reactions to histamine-2 receptor blockers.* Annals of Internal Medicine 114:1027-34; 1994
3. Rodriguez LAG, Jick H. *Risk of gynecomastia associated with cimetidine, omeprazole, and other antiulcer drugs.* British Medical Journal 308: 503-6; 1994
4. Carmichael JM, Zell SC. *Survey of ulcer recurrence risk factors associated with long-term cimetidine prescribing.* Drug Intelligence and Clinical Pharmacy 21: 452-8; 1987

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