Comment

The close temporal relation between treatment with mefenamic acid and the development of renal impairment, together with the further deterioration on inadvertent rechallenge with the drug, leaves little doubt that the drug was responsible. Our patient was known to have normal renal function before treatment and, unlike most cases documented in previous reports, had no clinical or biochemical evidence of hepatic, cardiac, or metabolic impairment.¹⁻³ The only possible predisposing factors would appear to be diuretic treatment and mild hypokalaemia. Apart from the absence of rash and confusion the clinical course of the illness was closely similar to that described by Robertson,¹ as was the biochemistry. Though renal function improved greatly after the drug was withdrawn, it did not return to pretreatment levels.

This case provides further evidence implicating mefenamic acid as an occasional cause of renal impairment; the occurrence of renal

impairment in an otherwise fit patient suggests that not only the elderly and dehydrated are at risk.

¹ Robertson CE, Ford MJ, Van Somers V, Dlugolecka M, Prescott LF. Mefenamic acid nephropathy. *Lancet* 1980;ii:232-4.

² Malik S, Artherton T, Griffiths ID. Mefenamic acid nephropathy. *Lancet* 1980;ii:746.

³ Venning V, Dixon AJ, Oliver DO. Mefenamic acid nephropathy. *Lancet* 1980;ii:745-6.

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Women and duodenal ulcer

A recent leading article¹ concluded, "an unanswered question is whether men and women respond equally well to the potent anti-ulcer drugs that are now available." To compare the clinical features and response to treatment of men and women with duodenal ulcer we reviewed our experience with histamine H₂-receptor antagonist drugs over the past five years.

Patients, methods, and results

Altogether 156 outpatients with endoscopically proved duodenal ulcer were treated for one month and then reassessed endoscopically. From 1975 to 1977, 78 patients were treated with cimetidine.² In 1979, 40 patients were treated in a double-blind trial with cimetidine and ranitidine,³ and in 1979-80, 38 patients were treated in an open assessment with ranitidine.³ The 78 patients treated in 1979-80 were consecutive cases and are combined in further analyses.

In 1975-7, 18% of the patients were women compared with 33% in

significantly higher ($p < 0.01$) in the women studied in 1979-80 than in those studied in 1975-7.

Comment

In our population women with duodenal ulcer appear to have a significantly shorter history of dyspepsia than men, despite presenting at a similar age. The proportion of women referred as outpatients with duodenal ulcer in this region is high and increased further during the past five years. During this period we found that women had become less likely than men to have duodenal ulcer that healed after one month of treatment with H₂-receptor antagonist drugs and that the ratio of maximal pepsin output to maximal acid output had increased in our female patients. In view of the increasing difficulty in healing the duodenal ulcers of our female patients, it is interesting that H₂-receptor antagonist drugs inhibit acid secretion more strongly than pepsin secretion.⁵

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Results of gastric secretory studies in patients studied during 1975-7 and 1979

		Acid output (mmol/h)		Pepsin output (mg/h)		Maximal pepsin output: maximal acid output (mg/mmol)
		Basal	Maximal†	Basal	Maximal†	
<i>1975-7</i>						
Men (n = 51)	7.0 ± 2.3	40.4 ± 3.6	75.0 ± 7.0	201.5 ± 8.9	5.31 ± 0.32	
Women (n = 12)	4.0 ± 1.8	28.3 ± 2.9**	41.0 ± 5.1*	99.7 ± 6.2***	3.53 ± 0.41	
<i>1979</i>						
Men (n = 22)	6.2 ± 1.0	40.7 ± 2.7	79.5 ± 11.0	220.5 ± 19.8	5.31 ± 0.33	
Women (n = 11)	3.4 ± 0.9	28.5 ± 1.8**	42.5 ± 7.7*	186.3 ± 26.2	6.42 ± 0.74‡	

†Output after stimulation with pentagastrin.

Significance of differences: *men v women $p < 0.05$; **men v women $p < 0.01$; ***men v women $p < 0.001$; ‡ women 1975-7 v women 1979 $p < 0.01$.

Conversion: SI to traditional units—Gastric acid: 1 mmol $\approx$ 36.5 mg.

1979-80 ($\chi^2 = 4.07$, $p < 0.05$). In 1975-7 the healing rates for men and women were similar (90% and 83% at one month), while in 1979-80 the healing rate, irrespective of treatment, was significantly higher in men (79%) than women (52%) ($\chi^2 = 4.54$, $p < 0.05$). Ulcers healed in one month in 91% of the men treated with ranitidine compared with 58% of women ($\chi^2 = 6.31$, $p < 0.05$). On the basis of counts of returned tablets there was no difference in drug compliance between men and women.

The mean age at presentation was similar in men and women, and there was no difference in the duration of current relapse of symptoms. Men had significantly longer histories of dyspepsia (mean 12.1 years) than women (mean 6.6 years) ($p < 0.01$). Seventy-seven per cent of the men and 73% of the women were cigarette smokers; the proportions of smokers in the general population in Scotland are 49.6% and 42.6% respectively.⁴ Women who smoked cigarettes tended to have ulcers less likely to heal (eight out of 19 had healed at one month) than non-smokers (five out of six healed).

Acid and pepsin outputs, both basally and during infusion of pentagastrin 2 μ g/kg for one hour, are shown in the table. In 1975-7 men had a significantly higher maximal pepsin output than women ($p < 0.001$), but in 1979-80 there was no difference between the sexes. The women in 1979-80 had a significantly higher maximal pepsin output than the women in 1975-7 ($p < 0.01$), despite having an identical maximal acid output. The ratio of maximal pepsin output to maximal acid output was lower in women than men in 1975-7 but higher in women than men in 1979-80; and was

¹ Anonymous. Sex differences in duodenal ulcer. *Br Med J* 1979;i:641-2.

² Cargill JM, Peden NR, Saunders JHB, Wormsley KG. Very long-term treatment of peptic ulcer with cimetidine. *Lancet* 1978;ii:1113-5.

³ Peden NR, Boyd EJS, Saunders JHB, Wormsley KG. Ranitidine in the treatment of duodenal ulcer. *Scand J Gastroenterol* (in press).

⁴ Bostock Y, Davies JK. Recent changes in the prevalence of cigarette smoking in Scotland compared with trends in England and Wales. *Health Trends* 1980;12:41-4.

⁵ Aadland E, Berstad A, Semb LS. Inhibition of pentagastrin-stimulated gastric secretion by cimetidine in healthy subjects. In: Burland WL, Simkins MA, eds. *Cimetidine. Proceedings of the second international symposium on histamine H₂-receptor antagonists*. Amsterdam-Oxford: Excerpta Medica, 1977.

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