

- 2 Haboubi NY, Ali HH, Braganza JM. Altered liver histology in patients with pancreatitis: A clue to etiology? *Mt Sinai J Med* 1986; 53: 380-8.
- 3 Sandilands D, Jeffrey IJM, Haboubi NY, MacLennan IAM, Braganza JM. Abnormal drug metabolism in chronic pancreatitis. *Gastroenterology* 1990; 98: 766-72.

### *Helicobacter pylori* infection rates in relation to age and social class in a population of Welsh men

EDITOR, — We previously reported results from a study looking at the prevalence of *Helicobacter pylori* IgG antibodies in a population of 749 randomly selected men, aged 30-75 years, from Caerphilly, South Wales.<sup>1</sup> Evidence has recently been presented to suggest that acquisition of *H pylori* infection is related to childhood living conditions.<sup>2,3</sup> In our study, information was available on current and past household size for 563 men and we have now analysed this in relationship to antibody prevalence. There was a strong linear trend between antibody prevalence and the number of the subjects' siblings (see Table). This is consistent with the reported relationships between antibody prevalence and childhood domestic crowding<sup>2</sup> and sharing a bed as a child.<sup>3</sup> We found no relationship between antibody prevalence and the number of children currently sharing the same household as the subject (unlike Mendall *et al*),<sup>2</sup> nor was there a relationship with the number of adults currently sharing the household (consistent with Mendall *et al*).

The associations observed in the two studies<sup>2,3</sup> and our own suggest that early social environment may be of particular significance in relation to *H pylori* transmission. If *H pylori* infection occurs primarily as a result of childhood contact, then the positive relationship between *H pylori* prevalence and age, which has been repeatedly observed,<sup>4</sup> may partly reflect a decrease in childhood acquisition rates over time — that is, a cohort effect.<sup>5</sup> Such an effect is illustrated in the data from Caerphilly (See Figure) which shows the prevalence of *H pylori* by decade of birth and social class (this was previously presented by age and social class). The prevalence was extremely high in those born at the beginning of the century, decreasing during successive birth cohorts, with the decline being most rapid for those in upper social class groups. We suggest that if early childhood is a particularly critical period for

**Table** Total number of men and number (%) positive for *Helicobacter pylori* IgG antibodies in Caerphilly by number of siblings and by number of children (aged <17 years) and number of adults (≥17 years) in current household

		Total No of men	No (%) of men positive
Number of siblings	0-1	150	59 (39.3)
	2-3	193	101 (52.3)
	>3	220	138 (62.7)
			$\chi^2$ (trend) <sup>1</sup> = 6.69 p<0.01
Number of children in current household	0-1	367	210 (57.2)
	2-3	164	73 (44.5)
	>3	32	15 (46.9)
			$\chi^2$ (trend) <sup>1</sup> = 0.05 NS
Number of adults in current household	1-2	361	175 (48.5)
	3	117	70 (59.8)
	4	85	53 (62.4)
			$\chi^2$ (trend) <sup>1</sup> = 0.40 NS

<sup>1</sup> Adjusted for age (30-34, 35-44, 45-54, 55-64, 65-69) and social class (I and II, III, IV and V).

acquisition of *H pylori* infection then improvements in living conditions will have resulted in reduced acquisition rates in the United Kingdom during the century as seen in the Figure. Such a pattern of declining infection would be consistent with decreases in suspected *H pylori* associated diseases, notably duodenal ulcer<sup>6</sup> and gastric cancer<sup>7</sup> observed in the United Kingdom in recent decades.

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- 1 Sitas F, Forman D, Yarnell JWG, Burr ML, Elwood PC, *et al*. *Helicobacter pylori* infection rates in relation to age and social class in a population of Welsh men. *Gut* 1991; 32: 25-8.
- 2 Mendall MA, Goggin PM, Molineaux N, Levy J, Toosy T, Strachan D, *et al*. Childhood living conditions and *Helicobacter pylori* seropositivity in adult life. *Lancet* 1992; 339: 896-7.
- 3 Galpin OP, Whitaker CJ, Dubiel AJ. *Helicobacter pylori* infection and overcrowding in childhood. *Lancet* 1992; 339: 619.

- 4 Taylor DN, Blaser MJ. The epidemiology of *Helicobacter pylori* infection. *Epidemiol Rev* 1991; 13: 42-59.
- 5 Marshall BJ. *Helicobacter pylori*: its link to gastritis and peptic ulcer disease. *Rev Infect Dis* 1990; 12: 87-93.
- 6 Langman MJS. Recent changes in the patterns of chronic digestive disease in the United Kingdom. *Postgrad Med J* 1984; 60: 733-6.
- 7 Doll R. Are we winning the fight against cancer? An epidemiological assessment. *Eur J Cancer* 1990; 26: 500-8.

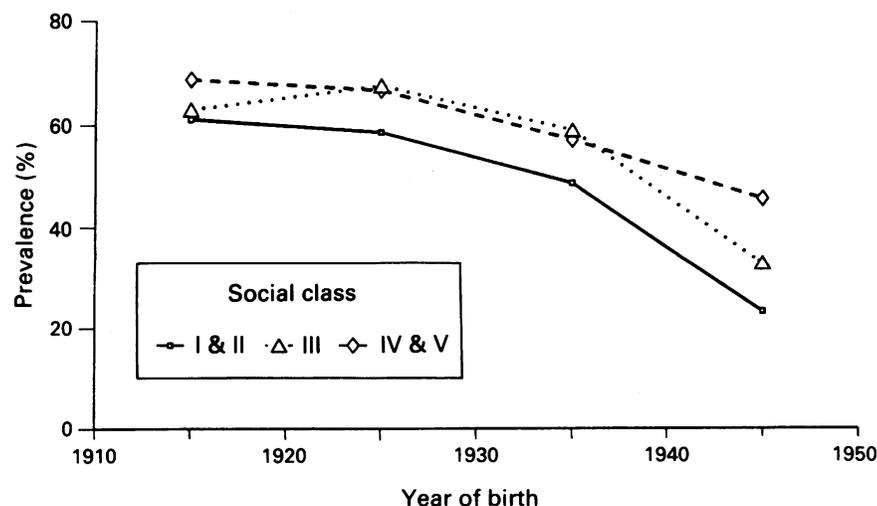
### Sulphasalazine in ulcerative colitis

EDITOR, — A recently completed review is strongly supportive of the opinion expressed in the leading article,<sup>1</sup> that the mechanism of therapeutic action of sulphasalazine in inflammatory bowel diseases is different from that of various newer sulphapyridine free 5-aminosalicylic acid (5ASA) preparations. The review<sup>2</sup> which studies anti-inflammatory drug treatment of radiation induced damage has shown that both acute and chronic enterocolitis responded favourably to sulphasalazine in all series published to date<sup>3-7</sup>. In direct contrast, 5ASA administered orally (Baughan CA, *et al*, unpublished data), in enemas<sup>8,9</sup> or suppositories<sup>10</sup> was, at best, ineffective and tended to cause symptomatic worsening of radiation enterocolitis/proctitis.

The inflammatory reactions of the gut to ionising radiations have not been well characterised. They differ from those of the idiopathic inflammatory bowel diseases because in radiation enteritis both subjective and objective improvement has been found in response to non-steroidal anti-inflammatory drugs including aspirin.<sup>2</sup> This suggests that the endogenous cyclooxygenase products are deleterious, unlike in idiopathic inflammatory bowel diseases.<sup>1</sup> The difference, however, in therapeutic effectiveness between sulphasalazine and 5ASA shown for a common complication of radiotherapy to the abdomen or pelvis illustrates well a basic divergence in the respective modes of drug action.

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- 1 Hayllar J, Bjarnason I. Sulphasalazine in ulcerative colitis: in memoriam? *Gut* 1991; 32: 462-3.
- 2 Michalowski A. Post-irradiation modification of normal tissue injury: lessons from the clinic. *Br J Radiol* (in press).
- 3 Jacobs H, Rindt W, Schmid N. Beitrag zur Behandlung der Strahlenproktitis. *Geburtshilfe Frauenheilkd* 1971; 31: 1114-7.
- 4 Rauch K, Weiland H. Behandlung der radiogenen Kolitis mit Salicylazosulfapyridin (Azulfidine). *Strahlentherapie* 1972; 143: 660-3.
- 5 Goldstein F, Khoury J, Thornton JJ. Treatment of chronic radiation enteritis and colitis with salicylazosulfapyridine and systemic corticosteroids. *Am J Gastroenterol* 1976; 65: 201-8.
- 6 Ben Bouali A, Varlan E. Intérêt de l'association salazopyrine comprimé-lavement dans les colites radiques. *Med Chir Dig* 1984; 13: 559-65.
- 7 Kochhar R, Patel F, Dhar A, Sharma SC, Ayyagari S, Aggarwal R, *et al*. Radiation-induced proctosigmoiditis. Prospective, randomized, double-blind controlled trial of oral sulfasalazine plus rectal steroids versus rectal sucralfate. *Dig Dis Sci* 1991; 36: 103-7.
- 8 Baum CA, Biddle WL, Miner PB. Failure of 5-aminosalicylic acid enemas to improve chronic radiation proctitis. *Dig Dis Sci* 1989; 34: 758-60.
- 9 Triantafyllidis JK, Dadioti P, Nicolakis D, Mericas E. High doses of 5-aminosalicylic acid enemas in chronic radiation proctitis: comparison with betamethasone enemas. *Am J Gastroenterol* 1990; 85: 1537-8.
- 10 Freund U, Schölmerich J, Siems H, Kluge F, Schäfer HE, Wannenmacher M. Unerwünschte Nebenwirkungen bei Anwendung von Mesalazine (5-Aminosalicylsäure) unter Strahlentherapie. *Strahlenther Onkol* 1987; 163: 678-80.



Prevalence of *H pylori* IgG antibodies in men from Caerphilly by year of birth and by social class. (Based on sampling in 1979, ie men born in 1910-19, 1920-29... were 60-69, 50-59... etc.)