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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.¹ Evidence has recently been presented to suggest that acquisition of *H pylori* infection is related to childhood living conditions.^{2,3} 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 crowding² and sharing a bed as a child.³ We found no relationship between antibody prevalence and the number of children currently sharing the same household as the subject (unlike Mendall *et al*),² 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^{2,3} 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,⁴ may partly reflect a decrease in childhood acquisition rates over time — that is, a cohort effect.⁵ 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)
			χ^2 (trend) ¹ = 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)
			χ^2 (trend) ¹ = 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)
			χ^2 (trend) ¹ = 0.40 NS

¹ 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 ulcer⁶ and gastric cancer⁷ observed in the United Kingdom in recent decades.

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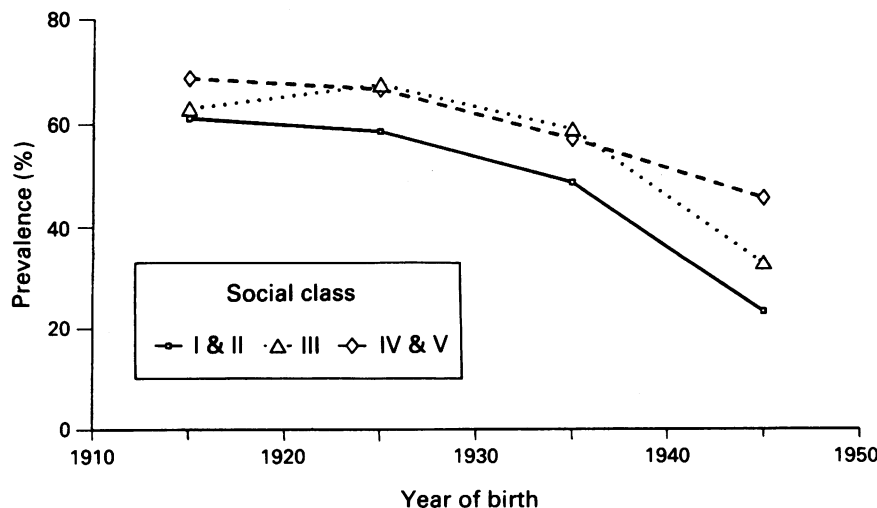
Sulphasalazine in ulcerative colitis

EDITOR, — A recently completed review is strongly supportive of the opinion expressed in the leading article,¹ 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 review² 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 date³⁻⁷. In direct contrast, 5ASA administered orally (Baughan CA, *et al*, unpublished data), in enemas^{8,9} or suppositories¹⁰ 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.² This suggests that the endogenous cyclooxygenase products are deleterious, unlike in idiopathic inflammatory bowel diseases.¹ 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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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.)