Table 1—Thyroid antibody concentrations (expressed as means (SD)) and prevalence of hepatitis antibodies in patients with Hashimoto's thyroiditis and with hepatitis C

	Hashimoto's thyroiditis (n=118)	Hepatitis C (n=59)
Antibodies to:		
Thyroid microsomes (IU/l)	3196 (5875)	22 (50)
Thyroglobulin (IU/l)	1763 (5928)	52 (124)
No (%) of patients positive for:		
Hepatitis A virus	62 (53)	Not done
Hepatitis B virus	5 (4)	Not done
Hepatitis C virus	3 (3)	59 (100)

microsomes were seen in two patients and increased concentrations of antibodies to thyroglobulin in one. Table 1 shows the mean concentrations in both groups of patients. Thyroid hormone concentrations were below the normal range in only one patient positive for hepatitis C virus, and in this patient thyroid autoantibodies were not detectable.

We conclude that in patients with Hashimoto's thyroiditis the prevalence of hepatitis C virus is only slightly increased and the prevalence of hepatitis A and B viruses is not increased. Raised thyroid antibody concentrations, as seen in some patients with hepatitis C, may reflect a non-specific immune reaction or susceptibility to other autoimmune diseases.

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Method of election to BMA craft committees should be changed

EDITOR,—Douglas Carnall asks why doctors do not get involved in medical politics.¹ Two possible reasons that he does not mention are, firstly, the damage that many junior doctors believe that active involvement in medical politics can do to their careers and, secondly, a prevailing public ethos over the past 15 years that self interested behaviour is laudable but collective action is not. Carnall mentions the recent accusations that some craft committees are unrepresentative and out of touch.^{2,4} I suggest that all crafts should take note of the unease that has been expressed about the way in which the General Medical Services Committee is elected.

A sizeable proportion of members of all craft committees are elected at the BMA's annual representative meeting. This effectively allows well known political figures to be re-elected without having to return to the "grass roots" to obtain

legitimacy. Craft committees would be more representative and more in touch if doctors sat on them only after election by the membership as a whole.

It is, of course, always necessary to find a compromise between ensuring the efficacy and efficiency of the political process and being over democratic. I suggest, however, that the current practice of allowing election to craft committees from the annual representative meeting is counter productive if it allows cliques continually to re-elect themselves without needing to refer back to the wishes of the wider membership. Imagine the furore that would occur if a quarter of members of parliament were elected by members of parliament themselves rather than by the general public.

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Coronary heart disease and atrial fibrillation

Studies have not shown a causal relation

EDITOR,—Gregory Y H Lip and colleagues are not the first to state that coronary heart disease is top of the list of common causes of atrial fibrillation.¹ This "fact" continues to be quoted in journals, textbooks, and medical schools, yet the evidence for a causal link between chronic atrial fibrillation and coronary disease is weak, if such a link exists at all.

A distinction has to be made between conditions that happen to be associated and those that are causal. The data from the Framingham study depicted by the authors show hypertensive heart disease to be the commonest condition associated with the development of atrial fibrillation, occurring in 45.7% of male and 51.2% of female patients. Since the condition was common in the control population (men 28.3%, women 36.7%), however, its predictive value was not great, the relative risk of atrial fibrillation being 2.1 and 1.9 in men and women respectively. Cardiac failure and rheumatic heart disease had a high predictive value (relative risks in men 7.5 and 8.3 respectively and in women 5.7 and 15.3 respectively) but were less commonly associated (14.3% and 10.2% respectively in men, 14.3% and 26.5% respectively in women).

With regard to the supposed causal relation with ischaemic heart disease, when the influence of coexisting cardiac failure and rheumatic and hypertensive heart disease was excluded from analysis of Framingham data the independent effect of coronary disease on the development of chronic atrial fibrillation was not significant in either sex.² Even the relation with transient atrial fibrillation was found only in men. Onundarson *et al* studied over 9000 subjects and found no significant relation between the two conditions.³ The coronary artery surgery study investigated 18343 patients with angiographically proved coronary disease and found atrial fibrillation to be present in only 0.6%,⁴ a figure comparable with that found in studies in other populations.⁴ Haddad *et al* noted only one case of atrial fibrillation in 496 patients with angiographically proved coronary disease.⁵

Surely if a link existed it would have been shown in these studies. I challenge Lip and colleagues to give hard evidence to justify placing coronary

disease at the head of a list of causes of atrial fibrillation.

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Author's reply

EDITOR,—Nigel Wheeldon discusses the association between atrial fibrillation and coronary disease, but much depends on the criteria used for diagnosis. Many epidemiological studies have depended on electrocardiographic criteria or the clinical history. Studies depending solely on ST-T wave abnormalities may encounter difficulties in interpretation, especially if patients are taking digoxin or have left ventricular hypertrophy.

The frequency of coronary disease or other aetiological causes of atrial fibrillation depends on the population studied. In surveys of patients admitted to hospital acutely with atrial fibrillation, ischaemic heart disease was the commonest aetiological factor, followed by hypertension and valve disease.^{1,2} The studies cited by Wheeldon in angiographically proved coronary disease could be considered to have been carried out in highly selected hospital based populations. Furthermore, atrial fibrillation may occur in patients with myocardial infarction or heart failure; when the latter is not due to hypertension, valve disease, or idiopathic cardiomyopathy, coronary disease is usually assumed to be the cause, especially in elderly patients.

In contrast to hospital based studies, population studies such as the Framingham³ and Manitoba studies⁴ reported that hypertension was the aetiological factor most commonly associated with atrial fibrillation, with coronary disease coming second. In these follow up studies data were analysed for causality (that is, the risk of atrial fibrillation developing). In the Framingham study, even after multivariate analysis, hypertension and heart failure remained important risk factors for atrial fibrillation.³ In the Manitoba study, however, ischaemic heart disease was associated with one of the highest relative risks for atrial fibrillation (3.62 for myocardial infarction, 2.84 for angina) with a multivariate Cox model, compared with a lower relative risk from hypertension (1.42).⁴

The population study by Onundarson *et al* cited by Wheeldon studied only relatively young subjects (aged 32-64), in whom the prevalence of atrial fibrillation and ischaemic heart disease is usually low. Age is an important consideration: the prevalence of atrial fibrillation increases with age, and it is often presumed that the likeliest underlying cause is occult coronary disease. Unfortunately, there have been few population based studies in Britain, and published studies have been criticised as having been performed in unrepresentative populations.⁵

Colleagues and I recently completed a community based survey of atrial fibrillation in two general practices in Birmingham; the commonest aetiological factors were hypertension (in 37%), ischaemic heart disease (29%), and valve disease (26%). Interestingly, however, only a third of patients with atrial fibrillation had presented to hospital, which suggests that hospital based populations may greatly misrepresent the true