patients may also be taking an antidepressant with anticholinergic properties and, almost routinely, receive an anticholinergic drug such as procyclidine to prevent or alleviate rigidity.

Though some patients with anticholinergic intoxication will be "hot as a hare, blind as a bat, red as beetroot, and mad as a hatter," in psychiatric practice they will more probably be noticed to have a fever and will be diagnosed as having the neuroleptic malignant syndrome. Patients considered to have this syndrome should always be examined for the physical hallmarks of anticholinergic intoxication, particularly pupillary dilatation and dry skin and mucous membranes. The investigation and treatment of this condition are considerably less enigmatic than those of the neuroleptic malignant syndrome and have been well described by Lipowski.[3]

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2 Howells RB. Toxic, metabolic and endocrine disorders. In: Stein G, Wilkinson G, eds. *College seminars in adult psychiatry.* London: Gaskell (in press).
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Injection immunotherapy

EDITOR,—In A J Frew's article on injection immunotherapy one of the display panels states that insect venom immunotherapy is not recommended in patients with a history of chronic perennial asthma.[1] Such advice would be widely accepted when applied to allergen immunotherapy for rhinoconjunctivitis, but I believe it is unnecessary to extrapolate this advice to people allergic to insect venom.

Since 1977 I have been associated with the insect venom allergy clinic at Guy's Hospital, where we have successfully and safely treated many asthmatic patients as well as those with hypertension and even ischaemic heart disease. When anaphylaxis follows either injections or stings asthma is an important risk factor. Most of the deaths reported in young patients receiving injection immunotherapy for inhaled allergens before 1986 were due to acute severe asthma.[2] This makes it imperative for asthmatic patients to be desensitised to venom if they have had generalised reactions to stings. The benefit:risk ratio for immunotherapy is higher in patients who have risk factors such as cardiovascular disease or asthma because of the risk of a sting or of unsupervised adrenaline administration in such patients.

Obviously, it is important to take careful account of the asthmatic status of patients undergoing this treatment. In our clinic all patients have their peak expiratory flow rates measured before the injections and before they are allowed to leave after their mandatory period of medical supervision. Patients who come to the clinic with an exacerbation of their asthma are not given their next injection until the exacerbation has responded to treatment. In the case of children I consider that venom immunotherapy should be recommended only for those who are asthmatic. The only child dying from an anaphylactic reaction to a bee sting of whom I have personal knowledge was known to be asthmatic.

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Ultrasound dating subject to bias

EDITOR,—Mark Wilcox and colleagues used ultrasonography to determine fetal age and reported a stronger correlation between birth weight and gestational age at term than has been observed previously.[1] We believe that their approach is subject to bias.

Dating methods based on ultrasonography do not take into account the natural variability of fetal size early in pregnancy. Thus a relatively large fetus at any given time will be assessed as being older and a relatively small fetus of identical gestational age will be assessed as being younger.[2] If we assume that fetuses tend to keep their relative size throughout pregnancy then among newborn infants of exactly the same true gestational age but different sizes there would be a correlation of weight with ultrasonographically determined gestational age: the largest would have the longest gestation and the smallest would have the shortest. This could account for the authors' finding that, among term births, the curve showing birth weight by gestational age was steeper than that derived from datasets based on the last menstrual period. Using the last menstrual period has its own limitations, but this particular bias is not among them. For all its merits, ultrasonography is still not the gold standard.

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Avoidable factors in stroke

Smoking, drinking, and hypertension

EDITOR,—J N Payne and colleagues identify shortcomings in the care of patients dying of diseases related to hypertension.[1] I carried out a survey of modifiable risk factors in 70 consecutive young patients with stroke (aged under 55) admitted to hospital over five years.

The main modifiable risk factors identified (table) were hypertension, current cigarette smoking, and excessive alcohol intake (confirmed by macrocytosis and raised γ glutamyl transferase activity). Ten patients had had hypertension diagnosed previously but were not taking antihypertensive drugs at the time of the stroke. Seven patients in whom hypertension had not been diagnosed had raised blood pressure and electrocardiographic evidence of longstanding hypertension (left ventricular hypertrophy). Of the 37 normotensive patients, 27 were current smokers or had an excessive alcohol intake, or both.

In up to 44 of the 70 patients in this series modifiable risk factors may have been managed inadequately. The reasons for this were not addressed by the study, but there are obvious lessons regarding the reduction of stroke in this age group.

Modified risk factors in 70 young people with stroke

		No
No risk factor		10
Hypertension		33
Current treatment	16	
No current treatment	10	
? Undiagnosed	7	
Cigarette smoking		45
Excessive alcohol intake		19
Diabetes mellitus		5
Atrial fibrillation		3

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1 Payne JN, Milner PC, Saul C, Bowns IR, Hannay DR, Ramsay LE. Local confidential inquiry into avoidable factors in deaths from stroke and hypertensive disease. *BMJ* 1993;307:1027-30. (23 October.)

Consider carotid endarterectomy

EDITOR,—It was depressing to note that avoidable factors may have contributed to the death of 44% of those patients with hypertension who died in J N Payne and colleagues' survey of avoidable factors in deaths from stroke and hypertension disease.[1] In a study of 168 general practitioners in Leicestershire only 21% were aware of the results of the European and North American carotid surgery trials.[2]

Over 2900 patients have been recruited to the European carotid surgery trial, of whom about half were hypertensive, with a diastolic blood pressure ≥90 mm Hg, at the time of randomisation. The trial has shown a reduction over five years of over 20% in ischaemic stroke in the ipsilateral hemisphere in patients who had carotid endarterectomy compared with patients who had no surgical treatment as prophylaxis against stroke; it also showed nearly 10% benefit for surgery when all strokes, including deaths during surgery, were considered after five years. In other words, carotid endarterectomy confers a clear benefit over best medical treatment alone in a patient who has a tight carotid stenosis (>82%), provided it is symptomatic. At present, in Britain fewer than half of the people who would benefit from carotid endarterectomy undergo it.

Thus it seems that at primary care level an alarming number of patients are dying of stroke or disease related to hypertension that might have been prevented; only a small number of general practitioners are aware of the benefits of surgery for patients with a symptomatic tight carotid stenosis; hypertension may well be associated with carotid stenosis in a patient with stroke; and most eligible patients are denied a valuable method of preventing stroke—that is, carotid endarterectomy.

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Screening for breast cancer

Randomised trials testify to benefit

EDITOR,—Recent letters have criticised screening for breast cancer by mammography,[1,2] which is the only method of screening for malignancy that has been shown to be of value in rigorous randomised trials. Harold Hewitt incorrectly states that there is no evidence that detection of breast cancers by screening eliminates dissemination.[1] There is clear evidence that screening detects less aggressive cancers, which are less likely to have disseminated.[3]

Although Bruno Barmus presents data on