

extract can in no way be considered dangerous. Many wise doctors will safely continue to give thyroid extract to patients who have been well on it for years. Newly diagnosed myxoedema should be treated with thyroxine (or very rarely triiodothyronine), but elderly women on thyroid extract are not living dangerously.

P B S FOWLER

Charing Cross Hospital,  
London W6

### Beta-blockers in treatment of hypertension

SIR,—Dr R G Wilcox's recent comparative study of once-daily hypotensive treatment (5 August, p 383) showed that atenolol 200 mg produced significantly greater effect than the other agents in the doses tested. He rightly points out that the doses of beta-blocking drugs may not have been equipotent, illustrating a potential limitation of fixed-dose comparative studies. Little further hypotensive effect can be expected by increasing the dose of atenolol further,<sup>1</sup> but this is not necessarily true of the other beta-blocking drugs, and he himself suggests that higher doses of acebutolol or timolol might be more effective.

I am able to confirm these speculations in the case of acebutolol from a recent study.<sup>2</sup> In the twice-daily dose ranging part of this study (n=11), where the dose of acebutolol was increased above the 400 mg/day used by Dr Wilcox, further falls in blood pressure were produced. This fall in blood pressure was unchanged when each subject's total daily dose was given once daily and blood pressure measured more than 24 h after dosing. Furthermore, there was no increase in the low incidence of side effects. In addition, I found that acebutolol 400 mg produced less beta-blockade, measured as reduction in exercise tachycardia, than atenolol 200 mg (maximum  $23 \pm 4\%$  v  $29 \pm 3\%$ ,  $P < 0.05$ , n=8), confirming a lack of equipotency in beta-blockade in Dr Wilcox's study.

If useful short-term differences are to be shown between different beta-blockers in the treatment of hypertension they will relate to the magnitude of maximum effect and the side effects and compliance present at any specified level of effect with different agents. Consequently full assessment of the comparative efficacy of beta-blockers in hypertension will also require optimum-dose studies of these agents.

MICHAEL MARTIN

Department of Therapeutics,  
Hallamshire Hospital,  
Sheffield

<sup>1</sup> Zacharias, F J, *et al*, *Postgraduate Medical Journal*, 1977, 53, suppl, p 114.

<sup>2</sup> Martin, M A, *et al*, *British Journal of Clinical Pharmacology*. In press.

SIR,—We were interested in the paper by Dr R G Willcox (5 August, p 383), as too few studies measure exercise blood pressure during the 24-h period following drug administration. It is surely misleading, though, for the author to discuss changes in exercise blood pressure levels when the only reading taken was immediately on cessation of exercise, this presumably being at some point between 10 and 45 s of the post-exercise phase. Of more interest would be the blood pressure recorded during, say, the last 30 s of exercise. Absolute levels, in both the untreated and treated

hypertensive patient, fall sharply by as much as 40–50 mm Hg systolic within the first 10–15 s of stopping exercise<sup>1</sup> and therefore it appears inappropriate to use a Hawksley random zero sphygmomanometer in a very rapidly changing haemodynamic situation. Furthermore, a 1-min dynamic exercise is useless in these studies as it takes at least 3 min to achieve steady-state levels of raised blood pressure.

As none of the drugs used in the study totally prevented significant increases in the immediate post-exercise systolic blood pressure it is reasonable to assume that the same applies to the blood pressure levels occurring towards the end of exercise and would suggest that the dose used was inadequate. From work we are currently evaluating it would appear that exercise-induced "peaks" of systolic blood pressure in certain hypertensive patients of 200 mm Hg or more can be attenuated in the whole of the 24-h period by adequate doses of some beta-blocking drugs following a single daily dose, the systolic pressure being reduced to the more normal range of 140–160 mm Hg. That the "peaks" carry important risks still remains to be proved, but in the meanwhile Sokolow's findings<sup>2</sup> may well be pertinent.

Finally, we feel that to demonstrate the hypotensive effect only at rest and not during exercise is an observation of limited value when most hypertensive patients are mobile during much of the 24-h period. The correct therapeutic dose is important and can only be judged by effective control of the stress peaks.

M BRIAN COMERFORD  
EDWIN BESTERMAN

Waller Cardiopulmonary Unit,  
St Mary's Hospital,  
London W2

<sup>1</sup> Millar-Craig, M, and Raftery, E B, personal communication.

<sup>2</sup> Sokolow, M, *et al*, *Circulation*, 1966, 34, 279.

### Computer confidentiality

SIR,—It is profoundly to be hoped that the medical profession as a whole does not conclude from the expressed intentions of the Department of Health and Social Security or from the views of its supporters in this matter (Drs P M Dunn and C H M Walker (22 July, p 276) and Dr P Samet (5 August, p 429)) that workers in the field of computing are collectively bent on undermining the concept of confidentiality of patients' records. To one who has worked in co-operation with doctors for any length of time it should be apparent that adequate physical security of computer files, even if it can be guaranteed (Dr Samet), is only a first prerequisite for overall effectiveness of a system which is bound to involve the human element at many levels. It should also be evident that it is equally important that a belief in this security be transmitted to the patients (that is, the general public) or their trust in their medical advisers will be lost, with all the unfortunate consequences that that would entail. I contend that at a time when stories of computers losing driving licences and producing inflated gas bills are rife, and when there is talk of totalitarian regimes using computerised records for their own ends, public faith in the integrity of the proposed scheme would with some justification be low, and that the medical professions are right in their present attitude of opposition (22 July, p 298; Dr R M Forrester, 5 August, p 429).

The situation may very well change, perhaps sooner than we realise; but it is imperative that even when the time comes when medical records can confidently be committed to computer storage on a nationwide scale each individual patient record must remain localised and under the control of the doctor or doctors responsible for that patient.

K A JOHNS

Department of Medical Statistics,  
Welsh National School of Medicine,  
Cardiff

### Cigarette smoking and postoperative deep-vein thrombosis

SIR,—Mr J K Clayton and his colleagues (5 August, p 402) confirm a lower incidence of postoperative isotopic deep-vein thrombosis (DVT) in cigarette smokers and suggest that this may be related to body weight or may "reflect resistance to venous thrombosis as a constitutional feature which correlates with but is not due to a predilection to smoke cigarettes."

In a recent series of 166 patients undergoing emergency or elective laparotomy for benign or malignant disease or retropericystectomy in whom two methods of intermittent pneumatic compression of the calves were compared we found that the total incidence of isotopically detected DVT was 31.3%. Ten out of 52 (19.2%) cigarette smokers, seven out of 17 (41.2%) pipe smokers, and 35 out of 97 (36.1%) non-smokers developed DVT. Cigarette smokers had a significantly lower incidence than the rest ( $\chi^2 = 5.15$ ,  $P < 0.05$ ).

The principal difference between non-smokers and cigarette smokers turned out to be their age, which was  $68.2 \pm 1.0$  (SEM) years among non-smokers and  $61.0 \pm 1.4$  among cigarette smokers. This difference is highly significant ( $t = 4.12$ ,  $P < 0.001$ ). The mean age of pipe smokers was 66.5 years, which did not differ significantly from that of non-smokers.

Analysis of the patients' weights as percentages of those expected (*Geigy Tables*) showed such a large variance (from  $-31\%$  to  $+237\%$ ) that we could not use a parametric test. Rather we arranged the weights into five groups:  $< 0\%$ ,  $0-4\%$ ,  $5-9\%$ ,  $10-14\%$ , and  $15\%+$ . The rates of DVT in these groups (cigarette smokers first, non-smokers together with pipe smokers second) were: 20% and 30%, 20% and 53%, 25% and 35%, 0% and 30%, and 22% and 43%.

Although it may be true that cigarette smokers are younger and thinner than non-smokers, that is certainly not the whole explanation of the protective effect of this otherwise undesirable habit.

A V POLLOCK  
MARY EVANS

Scarborough Hospital,  
Scarborough, N Yorks

### Investigating stroke

SIR,—Your leading article (10 June, p 1503) highlights the dilemma clinicians face now that accurate, non-invasive technical equipment with which to investigate stroke patients has become available, at least in some areas. As you say, this applies particularly to at-risk groups—diabetics, hypertensives, and the elderly in general.

While working in the department of