

symptoms that may be of relevance. A similar situation exists with regard to patients presenting with arthralgia. In subsequent years one or two of these will develop an inflammatory arthritis but I do not feel it is efficient to follow up every such patient because of this possibility.

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#### Richard Feynman

Dr Beale (March 1997 *JRSM*, pp 166–9) describes how, investigating the *Challenger* space shuttle disaster, Richard Feynman found many failures and near failures, especially of the rings of the solid rocket boosters and the space shuttle main engines. Spotting a glass of ice water at dinner, Feynman realized that it was at a stable 32°F—that is, at the same temperature as that of the pad at launch. He caught a taxicab and bought a small C-clamp and pliers. Then at the inquiry meeting, he called for a glass of ice water and showed that, when a piece of the O ring was pressed for a while and released, it did not stretch back. For a few seconds at least, there was no resilience in the material at that temperature. It all seems so simple now, but it was the essence of genius to put the idea together.

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#### Hypertension management in general practice

Dr Whitfield and Mr Hughes (January 1997 *JRSM*, pp 12–15) draw attention to

differences in approach between general practitioners (GPs) and consultants to intervention in hypertensive patients. They rightly comment that many patients with hypertension are either not detected or not managed appropriately. However, they weaken the case for intervention by claiming that doctors are unrealistic about the degree of benefit that may be obtained, basing this claim on the response to a somewhat misleading question.

The proposition that treatment of hypertension is likely to prevent at least 10 cardiovascular events per year per 1000 practice patients may be demonstrably false. However, a more usual formulation of the question would relate to the benefit to be expected in a defined target group of patients—namely, those with hypertension. Within the group, the elderly are at particular risk and the numbers needed to treat (NNT) to prevent a cardiovascular event are much lower than the 850 treated for one year quoted by the authors on the basis of the MRC Mild Hypertension Trial<sup>1</sup>.

Thus, a recent meta-analysis of hypertension trials in older subjects concluded that NNTs for stroke prevention and coronary heart disease were 22 and 45 for five years' hypertension treatment, respectively<sup>2</sup>. Translated to a district population of 430 000 it was suggested that up to 500 vascular events could be prevented per year. This involved treating around 30 000 hypertensives aged 60–79<sup>2</sup>.

In Barnet, a stroke prevention project has been initiated, funded as part of the King's Fund PACE (Promoting Action on Clinical Effectiveness) Programme, aimed at improving detection and management of risk factors for stroke. A particular focus will be hypertension in older patients. A preliminary audit of hypertension management is currently being undertaken among

Barnet general practices. Initial returns from 23 GPs covering a total practice population of 41 815 indicate that, of 8383 patients aged 60 and above, while 76% were seen at least once during 1996, blood pressure was recorded in only 49%. Of these, 48% had a blood pressure recording of 160/90 or more, of whom 44% were receiving medication. These data confirm that there is scope for more complete case finding and for improved management of previously detected hypertension, which itself may reduce the risk of stroke by 53% in known hypertensives<sup>3</sup>.

While there are several ways of expressing the potential effectiveness of treatment on cardiovascular outcome, the above figures combined with those from the meta-analysis suggest that the average Barnet GP could be preventing two to three additional cardiovascular events per year by optimum management of those older patients eligible for antihypertensive treatment—results likely to be generalizable across the country. This formulation is considerably more encouraging than the estimate suggested by Whitfield and Hughes.

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- 3 Du X, Cruickshank K, McNamee R, *et al.* Case-control study of stroke and the quality of hypertension control in north west England. *BMJ* 1997;314:272–6