Osteoporosis prevention

Sir,

I read with interest M Rodgers and J E Miller's report (March *Journal*) on 45 postmenopausal women using transdermal oestradiol replacement therapy, 24 (53%) of whom had serum oestradiol levels below 150 pmols/l.[1] The authors infer that these women were given inadequate hormone replacement therapy (HRT) to protect against osteoporosis, and that serum oestradiol measurement is a suitable monitor for the adequacy of HRT for bone protection between bone mass measurements.

The effect of oestrogen on bone metabolism is complex, partly influencing bone remodelling and partly through stimulation of prostaglandins and calcitonin.[2] Lindsay suggests that mid-follicular oestrogen levels are probably sufficient,[3] but a minimum bone-sparing level has not been suggested. Lindsay also suggests that progestogens enhance the skeletal effects of oestrogen. Abdalla *et al* have shown norethisterone to be bone-sparing.[4] The authors of this paper report 34 women with an intact uterus; presumably these will have been co-prescribed progestogen. Oestradiol measurement cannot assess progestogenic effect.

Thirty-seven women were using transdermal patches of 50 μg of oestradiol or above. Seventeen of these had serum oestradiol levels of less than 150 pmol/l. Numerous trials have shown these doses to be bone-sparing when measured by a DEXA scan. Hillard *et al*[5] reported increased spinal and femoral bone density with three years continuous use of transdermal 17 beta-oestradiol 0.05 mg/day, and biochemical markers indicated a significant reduction in bone turnover.

Most women reported were using reservoir patches, which are known to have problems with adhesion and skin reaction, which, in turn, may reduce effective absorption. The newer matrix patches have fewer problems of this nature; absorption is good and skin reactions are low. No women were reported using percutaneous oestradiol gel. Various authors have reported good bone protection with doses of 2.5–5 g/day when measured by DEXA; Tremollieres *et al* showed bone protection with serum oestradiol levels at the start of the follicular phase.[6]

Bone densiometry is the gold standard monitor of bone-sparing therapy. We are tempted to look for other treatment monitors because few GPs have direct access. Studies show that transdermal oestrogen by patch, at or above 50 μg/day, and percutaneous gel, at or above 1.5 g/day (standard dose = two measures once a day), are bone-sparing. Individual serum levels cannot measure bone activity, nor can they monitor the effect of other co-prescribed therapies such as progestogen or calcium and vitamin D3. We must continue to press for proper access to bone densiometry.

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Deprivation payments and workload

Sir,

Recent papers have raised issues about the validity[1] and adequacy[2] of deprivation payments introduced in the 1990 contract, which were based on an underprivileged area score originally derived from eight census factors subjectively perceived by GPs as most affecting their workload.[3] The assumption that doctor workload increases with patients' deprivation has been questioned,[4] and we were able to test this by correlating deprivation payments with the results of a workload study carried out in 1991.[5]

In 1991, deprivation payments were based on the 1981 census, but in 1995 these were based on the 1991 census, which was undertaken at the same time as the workload study. For 100 GPs working full time in Sheffield in 1991, the number of hours worked per week providing general medical services (mean = 42.1 hours), and the total number of patients seen per week (mean = 166) in 1991, were correlated (Table 1) with the proportion of patients on their lists who lived in wards qualifying for deprivation payment in 1991 from the 1981 census (mean = 0.16) and in 1995 from the 1991 census (mean = 0.31). As would be expected, there were significant correlations between weekly workload and number of patients seen. But there were consistent negative correlations between the two estimates of

Table 1. Correlation coefficients for 100 general practitioners.

	Proportion of patients attracting deprivation payments in 1991 (1981 census/1991 list size)	Proportion of patients attracting deprivation payments in 1995 (1991 census/1995 list size)	Mean hours per week general medical services workload in 1991
Proportion of patients attracting deprivation payments in 1995 (1991 census/1995 list size)	0.7783 *P* = 0.000		
Mean hours per week general medical services workload in 1991	–0.1197 *P* = 0.236	–0.0627 *P* = 0.536	
Mean numbers of patients seen per week in 1991	–0.1497 *P* = 0.137	–0.0940 *P* = 0.352	0.4145 *P* = 0.000

NB: Spearman's rank order coefficient used. *P* values for 2-tailed test of significance. Low and medium deprivation payments counted the same (no high payments). Numbers of patients includes those seen in surgery, in clinics, and at home.

deprivation and the two measures of workload, which at least raises questions about the assumption that doctors working in deprived areas work harder than those who do not.

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Benefits of the Internet

Sir,
I am trying to interest my general practice colleagues in becoming more aware of the benefits of the Internet. Overall, general practitioners are conservative in their outlook and cautious of new ideas.

The development of computerization in general practice over the past 12 years has shown a complete lack of coordination, with no overall national policy or integration. The various large computer software suppliers to general practice have mainly guided the development of the software, with some standards set by the government. The result is that computerization has been allowed to evolve haphazardly in general practice, but at what cost? A huge sum of public money has been spent on administration, hardware, software, and maintenance contracts. Overpriced hardware and maintenance costs continue to be an obvious ongoing drain on National Health Service (NHS) resources. The erratic links between hospitals and general practice continue to frustrate GPs, who are drowning under the deluge of paperwork.

The Internet is being ignored, underused, and poorly understood by general practices. Doctors and administrators alike are baffled and short-sighted about its benefits, and consequently choose to ignore the tide sweeping towards them. When the dust settles and the mist clears, I fear I shall see another missed opportunity. GPs and the NHS as a whole will fail to go forward together and capitalize on the Internet revolution.

The problem should not be underestimated, as it will have an impact on all of us who work for or need the NHS. The efficient use of resources continues to exert severe pressure on GPs. Lack of expertise and a coherent centralized policy, hidden behind wasteful experimental mistakes, makes a fiasco in the developing Internet technology inevitable.

I had the same uneasy feelings 12 years ago when my colleagues talked in a condescending manner about the likely benefits of computerization. I do not claim to foretell the future, but I do recognize an illness I have seen before.

I hope to reach a wider audience and perhaps stimulate a greater awareness of how the NHS, and specifically my GP colleagues, needs to focus on and grasp the positive potential of the Internet.

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Repeat radiographs

Sir,
Ian Beggs highlights one aspect of referral letters where a lack of information can lead to inefficiency and potential harm from unnecessary radiation (May *Journal*).[1] It would be interesting to know the measures he refers to that have been introduced to increase awareness of the problem.

However, there is another side to the picture. We may legitimately ask how many of the clinic radiographs are necessary. I am surprised to learn that 'almost all new orthopaedic patients are examined radiographically.' In my own orthopaedic clinic, the annual rate for radiographs has varied from 27% to 45% of new patients. The practice of X-raying new patients on arrival at a clinic, before they are seen, may help the organization of the clinic but cannot be in the patients' interest. I do not support this practice. If it transpires that recent radiographs are available that were not mentioned in the referral letter, it is always possible to request them after seeing the patient, and I have to do this regularly.

I strongly support the plea for relevant information in GP referral letters, but perhaps hospital practice also needs to change.

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Resuscitation equipment and GPs

Sir,
Kathryn Griffith and her co-workers conclude that the patient should call '999' rather than their GP when they have chest pain (Letters, June *Journal*). Their evidence appears to be urban-based and atypical of the conditions in rural areas and small towns.

I practised in a rural area for 30 years and saw a case of myocardial infarction about every six months. I rapidly learnt that immediate response, leaving my wife or receptionist to inform the ambulance service, was the best approach.

In the majority of the 50–60 cases attended, I was with the patient approximately 10 minutes before the ambulance — long enough to have inserted a Venflon, given intravenous analgesia, and then commenced cardiac monitoring with a monitor/defibrillator. There were two occasions when the ambulance arrived first, but there were also two occasions when the patient was defibrillated before the ambulance was on the scene.

Attendance at acute myocardial infarctions is inconvenient, stressful, and unremunerative, but, outside heavily-populated urban areas, a joint approach by the GP and ambulance service, both carrying a defibrillator and oxygen, is surely a safer response.

A second reason for a medical presence is that the presenting symptom in most of these patients is severe chest pain, which only adequate intravenous analgesia can relieve.

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