Letters to the Editor

Osteoporosis management in elderly subjects—a UK survey of geriatricians

SIR—Osteoporosis is responsible for 60 000 hip fractures, 50 000 wrist fractures and 40 000 diagnosed vertebral fractures in the UK each year. Recent health economics data suggest that the cost of dealing with osteoporosis-related fractures in the UK is £942 million per annum [1]. However, few health commissions (17%) have a strategy for the management of osteoporosis [2] and most patients (86%) taking continuous oral corticosteroids are not receiving treatment for the prevention of osteoporosis [3]. We have examined UK geriatricians’ management of osteoporosis in elderly patients.

A standardized questionnaire was circulated to all 1368 members of the British Geriatrics Society in the July 1998 newsletter. From this we collected data on the grade of respondent, health region, access to dual energy x-ray absorptiometry (DXA), presence of osteoporosis guidelines and prescribing practices. The response rate was 30.3% (n = 414). Most (78%) respondents were consultant geriatricians; 17% were specialist registrars. We received replies from all the health regions of the United Kingdom.

Forty-two percent of respondents had access to DXA scans in their hospital, 51% had access via another hospital and 7% had no access. However, of those with access to DXA, access was restricted (e.g. via specialist osteoporosis clinic or bone specialist) in 45% of cases.

The existence of hospital guidelines for the general management of osteoporosis and of corticosteroid-induced osteoporosis were reported by only 34% and 26% of respondents respectively. However, there was great regional variation in the existence of guidelines: from 15% (West Midlands) to 58% (North West) for general osteoporosis guidelines and from 8% (Northern Ireland) to 37% (North West) for corticosteroid-induced osteoporosis guidelines (P < 0.05). Only 14%, 12% and 9% reported guidelines for osteoporosis management after hip, vertebral and forearm fractures respectively.

Cyclical etidronate and combined calcium and vitamin D preparations were the most popular treatments, being frequently or occasionally prescribed by 98.5% and 93.9% of respondents. Alendronate was occasionally or frequently prescribed in over 60% of cases. Hormone replacement therapy and calcitriol were much less frequently prescribed. There was no difference in the prescribing practices of consultants or specialist registrars. Hormone replacement therapy and calcitriol were significantly more frequently prescribed by respondents working in an integrated unit (P < 0.005). Thirty-four percent of respondents had used parenteral calcitonin in the management of severe back pain secondary to acute vertebral fracture.

In summary, though there is good availability of DXAs, access is restricted in many cases. The provision of hospital guidelines for the management of osteoporosis shows marked variation throughout the health regions. Recently developed guidelines issued by the Department of Health on the management of osteoporosis in general [4], and by the National Osteoporosis Society on the management of corticosteroid-induced osteoporosis [5], should have an impact in standardizing osteoporosis management.

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Chronic obstructive pulmonary disease and depression: analysis of depressive symptoms

SIR—In a previous report we found that the prevalence of depressive symptoms in patients with chronic obstructive pulmonary disease was 46% compared with 11% among age-matched healthy subjects and 26% among patients with other disabilities [1]. In that study, we screened for depression using the Brief Assessment Schedule Depression Cards (BASDEC) [2], a 19-item deck of cards requiring yes/no responses, using a cut-off score of ≥7 for a ‘case’ of depression. Although screening questionnaires are recommended [3], they are open to the criticism that they may include patients who have adjustment disorders rather than depressive disorders and that they do not help in decision-making about treatment for depression.

We carried out a follow-up of our original study 12–18 months later. The aims were to delineate more accurately the type of depression previously detected by the BASDEC and to ascertain whether or not the depression had remitted. We traced 58 subjects (89% of the original cohort), of whom 16 had died and 12...
declined to be seen. The remaining 30 patients (46%) agreed to be interviewed and were seen at home.

The review was carried out by a psychiatrist (A.T.) who had not been involved in the previous study and had no prior knowledge of the individual patients. We evaluated the mental state with the Geriatric Mental State Schedule (GMSS/AGECAT) [4], a semi-structured well-validated psychiatric diagnostic interview, and once again administered the BASDEC [2]. Additional information collected included current medication, in particular psychotropic medication, and whether or not the subject was under psychiatric care.

The ages of the 30 patients ranged from 73 to 90 (mean 78.7) with a slight excess of men (16/30). Using stage 2 of the AGECAT (which delivers a diagnosis equivalent to that made by a psychiatrist [5]), seven (23%) of the 30 were diagnosed as depressed and a further 13 (43%) as sub-cases of anxiety/depression (severity of 1 or 2). There was good agreement between cases detected by the AGECAT cases and those detected by the BASDEC (Table 1), with one false negative and two false positives who nevertheless were diagnosed as sub-cases for anxiety/depression using the AGECAT. Five patients (17%) had been or were still under psychiatric supervision. Four patients had been prescribed antidepressant medication and eight were taking minor tranquillisers.

We compared the results with those obtained for the same subjects at the initial assessment. Sixteen (53%) of the 30 patients had scored ≥7 on the BASDEC at entry. All eight patients who scored highly on the BASDEC at follow-up had done so at the initial screening.

The follow-up rate, at around 50%, is low, but not unexpected in a group of patients with a high mortality. Although we found that fewer patients had marked depressive symptoms (synonymous with major depression [5]) at follow-up than in our original study [1], almost one-quarter (23%) of patients with chronic obstructive pulmonary disease were diagnosed as having major depression and there were many sub-cases (43%) who had significant symptoms. Furthermore, depression in this population was found to be a chronic and not a self-limiting disorder.

The BASDEC performed well, identifying six out of the seven cases (85%), in keeping with previous estimates of its sensitivity [2]. It is easy to administer in circumstances where privacy may be difficult and does not take long. It is suited to a medical ward or outpatient clinic. As with other studies of depression in medical settings, rates of treatment for depression and referral to psychiatrists were disappointingly low [6]. Given the range of antidepressants available, it is difficult to understand why treatment rates are so low. However, patient acceptance of antidepressants may be another factor, and we are currently exploring this in an intervention study.

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### Table 1. Comparison of Brief Assessment Schedule Depression Cards (BASDEC) scores with Geriatric Mental State Schedule (AGECAT) diagnoses

<table>
<thead>
<tr>
<th>No. of subjects (%)</th>
<th>AGECAT diagnosis</th>
<th>BASDEC</th>
<th>&lt;7</th>
<th>≥7</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 (25)</td>
<td>Well</td>
<td></td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>7 (25)</td>
<td>Depression case</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1 (3)</td>
<td>Anxiety case</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2 (7)</td>
<td>Organic case</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>13 (45)</td>
<td>Sub-case anxiety/depression</td>
<td>2</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

### Doctors' training in manual handling

SIR—There is a statutory requirement for employers to ensure that new staff receive training on patient handling and have regular refresher courses [1]. Knowledge of manual handling techniques is recognized in the Joint Committee For Higher Medical Training logbook for specialist registrars in geriatric medicine [2]. One-quarter of all nursing injuries occurred in those working in care of the elderly wards, and the single most common activity resulting in injury was moving a patient up the bed [3]. Nursing staff are now routinely instructed in safe manual handling techniques and risk assessment by hospital training programmes.
We asked 60 doctors in specialties involved in care of elderly patients about their experience of manual handling. Only five had had any formal manual handling training. One-quarter had had some informal training from nursing staff. Seventy percent of doctors lift or move patients on their own at least once a week, with one-third (34%) lifting most days. Moving patient up the bed was the most common lift undertaken by doctors (60%), with transfer from chair to bed (23%) and sit to stand (16%) being undertaken less frequently. Eight doctors (14%) had injured themselves and eight had injured patients during lifting. Most doctors (71%) would value formal manual handling training.

Additionally, we practically assessed 19 doctors and six nurses on aspects of manual handling. Doctors were subjectively more likely to use unsafe techniques and poorer handler posture than nursing staff who had had previous manual handling training.

Doctors frequently lift or move patients on their own, most frequently moving the patient up the bed. Few have had any formal training in manual handling techniques. Most doctors we surveyed would welcome formal training in manual handling techniques which could reduce patient and doctor morbidity.

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Does everyone in heart failure need echocardiography?

SIR—Berkin’s editorial underscores the importance of echocardiography in heart failure, and I would disagree with the opinion that echocardiography is unlikely to reveal anything to alter management and is perhaps superfluous even when the diagnosis does appear to be clear from the available information [1].

Distinguishing systolic from diastolic left ventricular dysfunction is not possible on clinical grounds, and recommended guidelines for therapy of these conditions are different [2]. Knowledge of the aetiology of heart failure is also important. It does have an influence on prognosis, which will be of relevance for discussions with patients and families. Data from the Framingham Heart Study subjects indicate an influence of both aetiology and age at diagnosis on survival rates, with valvular heart disease, particularly in men, being associated with a worse prognosis [3]. Cox et al. found that 20 (39%) of 51 patients had a clinically significant valvular lesion, in nine of whom no murmur was heard, which to me indicates that this study far from supports a position of not carrying out an echocardiogram if there is strong clinical evidence of heart failure, as important prognostic information would be missed [4].

It is also not possible to rely on information from chest x-rays and electrocardiograms to rule out significant valvular disease. Bouma et al. found that 119 of 205 patients (58%) age 70 or over with clinically relevant isolated aortic stenosis (gradient ≥50 mmHg, or valve area ≤1.0 cm²) did not have left ventricular hypertrophy on the electrocardiogram [5]. In an earlier study of patients with aortic stenosis, Lombard and Selzer found a normal-sized heart on the chest x-rays of 190 (48.7%) of 390 patients, and no left ventricular hypertrophy on the electrocardiograms of 125 (32%) of 389 [6].

If limited echocardiography resources are to be directed towards those patients in whom the management may be altered by the echocardiogram findings, priority should be given to older patients. Hendry et al. found that echocardiography altered patient management plans for 41% of their heart failure patients (age range 71–96, mean 82). Calenda et al., in a study comparing the use of echocardiography as a diagnostic tool by internists and cardiologists in younger groups of patients (mean age for patient groups 53.8 and 58.3 respectively), found that echocardiogram findings altered management in only 10% of the internists’ patients and 16% of the cardiologists’ patients [7, 8].

All elderly patients with suspected heart failure should undergo echocardiography irrespective of the pre-test clinical picture, which may be misleading and inaccurate.

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SIR—Berkin’s editorial [1] on echocardiography in heart failure suggests that we should be aiming to perform echocardiography for all patients with suspected heart failure. This would involve a large increase in the current level of service provision: is this not a desirable objective? Currently, elderly patients may not have the same access to echocardiography as their younger counterparts [2] but equal access is important for a number of reasons.

In addition to the problems associated with diagnosing systolic dysfunction, accurately recognizing valvular disease can be a particular difficulty. In elderly people, advanced aortic valve disease often goes undetected because of an associated low cardiac output reducing the intensity of the associated murmur. In a North American cross-sectional study of elderly patients in long-term care, for example, up to 18% had aortic valve disease and few patients had a normal echocardiogram [3]. The problem is further compounded by interphysician variability in murmur interpretation [4].

The aetiology of the heart failure is important to establish in order that treatment can be targeted appropriately. Targeting treatments accurately is particularly important in elderly people because of polypharmacy and because adverse drug effects are commoner. Most cases of heart failure in elderly people are a result of underlying systolic dysfunction, valvular disease, atrial fibrillation or the consequences of hypertension with resultant diastolic dysfunction. An awareness of underlying structural heart disease is important in older patients, especially since they are very prone to postural hypotension if potent vasodilators or diuretics are being considered as part of their treatment for heart failure. Furthermore, knowledge of impaired systolic function can have implications for the use of β-blockers in those patients who have severe heart failure.

In addition to identifying underlying structural heart disease, echocardiography can identify the size of the left atrium and also the presence of left atrial thrombus. This has implications for anticoagulation [5], as does the presence or absence of left ventricular dysfunction.

There are varying degrees of requirement for echocardiography in heart failure patients. If patients have obvious clinical signs of heart failure, an abnormal electrocardiogram and chest x-ray and no murmur, then the case is less pressing. However, in older patients, where the clinical signs may be atypical, chest x-ray is more difficult to interpret and murmurs more common, there is more diagnostic doubt. In this context, echocardiography is required to confirm the cause of the heart failure.

The rise in requests for echocardiography in the last few years suggests that the clinical need for objective information about cardiac function is rising: it is important that elderly patients are part of plans for service provision, particularly as echocardiography is non-invasive and well tolerated [6].

Echocardiography does have limitations and accurate interpretation is the key to successful patient management. The preload conditions and the intravascular volume may influence echocardiographic findings and systolic function may vary from time to time, depending on the ischaemic load on the left ventricle. However, the TRACE [7] investigators have highlighted that accurate assessment of left ventricular function may be possible—even after relatively short periods of training.

The findings of echocardiography could influence the decision to prescribe or not prescribe diuretics, angiotensin-converting enzyme inhibitors, β-blockers, spironolactone and even warfarin. Therefore we would welcome and endorse Berkin’s comments. Clearly further research is required to address specifically the value and cost-effectiveness of echocardiography in older people.

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Author’s reply

SIR—I am in agreement with the correspondents that echocardiography should be freely available. However, at present in the UK it is not, and until there are more trained echocardiographers and some investment in equipment, the situation is unlikely to improve. It is therefore important to use the resources wisely and examine closely inequities in availability, real or perceived.

The largest group of patients with heart failure that do not have access to echocardiography are those at home rather than older people as such. Hospitalized elderly patients are well represented in the two hospital echocardiography departments with which I am associated. Direct-access echocardiography may go some way to redressing the imbalance, but it is becoming clearer that general practitioners prefer some specialist clinical input with echocardiography, rather than an isolated echo report. Departments of cardiology and, I suspect, departments of elderly medicine are still some way off being able to offer this as a routine clinical service.

Both letters include many comments about the uses of echocardiography, with which I largely agree. There does appear however to be a widespread misconception that echocardiography is necessary to determine the cause of the heart failure (as opposed to documenting the presence of left ventricular dysfunction and perhaps assessing the severity). I maintain that the history, examination and electrocardiogram findings will enable the cause of the heart failure (usually ischaemic heart disease and hypertension) to be determined in most patients. Even if the failure is diastolic rather than systolic, standard treatment with diuretics remains appropriate. The benefit of other treatments in diastolic heart failure remain unknown.

Treatment issues should still be determined largely by clinical assessment rather than echocardiography. Recent studies extend the use of both β-blockers and angiotensin-converting enzyme inhibitors in patients, independent of the left ventricular function. The β-blocker in heart failure trials [1, 2] suggest that these agents benefit patients with reduced left ventricular function. Paradoxically, the finding of reduced left ventricular function on echo may deter clinicians from using β-blockers, which are under-used in elderly patients. The recent HOPE study (unpublished but available on the New England Journal of Medicine website [3]) suggests that patients over 55 with vascular disease benefit from angiotensin-converting enzyme inhibition, even with preserved ventricular function. Hence there is less need to determine a ‘snapshot’ view of left ventricular function before considering optimal treatment.

To suggest that an echocardiographer can be trained in a “relatively short period” is naïve, and shows a misunderstanding of the method of echocardiography in the TRACE study. The images were acquired by non-echocardiographers after 2 weeks of intensive training, but interpreted by experienced echocardiographers. Performed in this way, the degree of left ventricular systolic dysfunction documented gave important prognostic information post-myocardial infarction, but the method has not been tested in chronic heart failure.

The remit of the Editorial was to discuss the use of echocardiography in heart failure, not valve disease. I have no difficulty in recommending this test when previously undiagnosed murmurs are heard. Naturally, echocardiography is a convenient adjunct to clinical assessment and stethoscope, but the concerns about missing an important but inaudible valve lesion causing heart failure are overstated. It is extremely rare for a haemodynamically important valve lesion, which requires management different from that of the heart failure, to be inaudible. Severe valve disease can occasionally be missed, but the patient is unlikely to have responded to standard therapy and echocardiography will almost certainly have been requested in that situation. The finding of mitral and tricuspid regurgitation is extremely common in elderly patients and is almost certainly over-reported and over-interpreted. The murmurs are usually inaudible because the ‘lesions’ are of no significance. Treatment of the valve lesion in its own right (i.e. valve surgery) is very rarely required.

Most echocardiography in the UK is carried out by technicians, and interpreted by clinicians without experience in echocardiography. Hence the potential for misunderstanding and misinterpretation is large. The current training programmes for cardiology trainees should help redress this imbalance and training should be extended to those in elderly medicine. However, at the moment I am in the unusual position of being both a major provider and consumer of echocardiography services. I see both under-use and over-use of this resource.

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