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Letters to the Editor

Anticoagulation of older patients: a need to modify current practice

SIR—Whilst Gedge *et al.* report on the clinical advantages of a low-dose warfarin induction regimen over the Fennerty regimen for anticoagulating elderly patients [1], Lip *et al.* question whether these results can be generalized to day-to-day clinical practice, or only where clinicians are well motivated, and patients able to cope with the dosage changes required [2].

In order to determine whether there is a need to modify current practice and introduce a protocol such as the modified Fennerty regimen to our service, we investigated routine clinical practice in our hospital. First, we investigated the relationship between age, anticoagulation response and induction doses used and, secondly, we conducted a survey among doctors working in the elderly-care wards of the influence of patients' ages upon their practice when initiating warfarin therapy.

We examined the anticoagulant clinic records and medical notes for the 50 patients commenced on, and referred to, the service in January and February 2000 for details of initial warfarin dosage regimen used and international normalized ratios (INRs) over the initiation period (which we defined as the first 2 weeks). We used INRs of $\geqslant 4$ and $\geqslant 6$ during this period as indicators of lack of optimal control and of marked increased risk of bleeding. For the second part of the study, physicians working within elderly care were asked to document the warfarin induction regimen they used and whether they modified this for elderly patients. We compared the significance of differences in results in patients below 70 years and aged 70 years and above using the χ^2 test.

The results, shown in Table 1, indicated that significantly more patients in the older group had an INR of $\geqslant 4$ at some time during the induction period. Whilst 75% of respondents to the questionnaires reported that they modified their induction regimens by using lower loading doses of warfarin for elderly patients, there was no significant difference between the groups in terms of the actual loading doses of warfarin used in the initiation regimens in the first 3 days.

Table 1. Details of subjects and warfarin induction (first 3 days)

	Age (years)	
	<70	$\geqslant 70$
No. of patients		
Total	24	26
INR during induction		
<4	17 (71%)	10 (38%)[a]
$\geqslant 4$	7 (29%)	16 (62%)[a]
$\geqslant 6$	1 (4%)	3 (12%)
Mean warfarin (mg)	24.3	23.0

[a]Significant difference between age groups, χ^2, $P<0.05$.

Our results support the observation of Gedge *et al.*, and sadly indicate no improvement on the results of Gladman and Dolan, who reported in 1995 that 58% of patients aged 75 and over had an INR $\geqslant 4$, and 17% of patients an INR of $\geqslant 6$ during the initiation phase [3]. We agree with Gedge *et al.* that efforts to improve the initiation and modification of anticoagulation in all patients, but particularly elderly subjects, are required to ensure that their risks of bleeding as a result of our interventions (however well-intentioned) are minimized.

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Adverse drug reactions and hospital admission of older patients

SIR—We read with interest the article on adverse drug reaction in elderly patients by Mannesse *et al.* [1]. We have also carried out a study of iatrogenic hospital admissions of older patients over a 6-month period: our study investigated patients aged 65 years and over admitted under one consultant between January and June 1998.

Of the 328 admissions, 30 (9.2%) were directly attributable to drug-related problems. Many (36%) of these admissions were due to inappropriate prescriptions. We defined 'inappropriate prescription' as medications prescribed where they were contraindicated or prescribed without a proper indication.

Cardiovascular drugs were responsible for the highest number of iatrogenic admissions (50%) followed by non-steroidal anti-inflammatory drugs (NSAIDs; 16.6%). Other drugs responsible were warfarin (13.3%), psychotropics (13.3%) and hypoglycaemic agents including insulin (6.6%). The findings were slightly different from

studies that have shown NSAIDs to be the commonest cause of iatrogenic hospital admissions [2, 3]. However, cardiovascular drugs may overtake NSAIDs in this regard, as has been shown in one recent study [4].

Our figure of iatrogenic admissions was lower than that found by Mannesse *et al.* [1]. This may be because we included slightly younger patients. It may also be because we excluded the admissions due to non-compliance and drug-related abnormalities found on laboratory investigation that were not the primary causes for hospital admission.

Iatrogenic admissions are sometimes unavoidable in elderly patients because of their altered pharmacokinetics and pharmacodynamics and also because they are often taking multiple medications. However, polypharmacy can be minimized by judicious prescribing.

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Treating acquired haemophilia: an ethical conundrum

SIR—Kelly and colleagues [1] report a rare case of acquired haemophilia that responded well to treatment. Such rare diseases can broaden our clinical thinking beyond purely biological considerations.

I look after a similar patient in whom the treatment raises particular ethical questions. This 69-year-old woman was admitted after barricading herself into her house. It was necessary to force the door open with a shovel to dislodge a chest of drawers wedged behind it. She was lying on a couch saying that she had not been able to move over the last 3 weeks because her legs 'gave out'. She said she was being victimized by people coming into the house and using hypnosis. She denied placing the chest of drawers behind the door and could not understand how it had come to be there. She had a history of chronic paranoid psychosis.

She was under a community-care order against which she had appealed, but which the mental welfare commissioners felt was still necessary. She had been on fortnightly clopixol injections, but had recently defaulted. She had a history of drug-induced parkinsonism, treated hypothyroidism and iron-deficiency anaemia.

On examination, she had massive leg oedema with ulcers, but no bruising or signs of bleeding. She was anaemic with a haemoglobin of 41 g/l, a low mean corpuscular volume (65.7 fl) normal platelet count, normal vitamin B12, but low serum ferritin concentration.

An intramuscular injection of clopixol caused massive bleeding from the injection site. A clotting screen showed an APTT of 2.4 with a factor VIII level of 0.02 iu/ml (2% activity) and a human factor VIII inhibitor level of 62.5 Bu/ml. No underlying cause was found for the acquired haemophilia and she responded well to transfusion, intravenous factor VIIa and cyclophosphamide; we avoided steroids because of the psychosis. The psychosis responded well to risperidone. Unfortunately, a further admission resulted from this lady tripping over her television cable and injuring her leg, with substantial bruising. At that time, her risperidone was stopped because of abnormal liver function tests. Once again she was discharged under the community-care order.

This lady is likely to become psychotic again. If she will not voluntarily take oral medication, we may not be able to give her intramuscular drugs for her psychosis until the haemophilia is corrected. We cannot directly treat her medical condition under mental health legislation. Under common law, she would still be able to withhold consent since she would understand the purpose of the treatment. She may therefore rationally choose to refuse medical treatment so that we have no treatment to offer for her psychosis and thus cannot detain her.

The question therefore arises: could we over-ride this lady's informed refusal of a treatment for a medical condition in order to treat her mental illness under mental health laws? Assuming this to be ethically acceptable, would the potential harm of physical restraint and attendant risks of intravenous cannulation outweigh the benefits of treating her psychosis? This rare condition has stretched my thinking as well as my knowledge.

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Non-tuberculous respiratory infections

SIR—We read with interest the details of Woodhead's presentation on respiratory infections in older patients in

Connolly and Shaw's conference report [1]. Morbidity and mortality are worse in old age. Important determinants include the cumulative impact of chronic insults to the lung (e.g. smoking) and chronic lung and systemic diseases. Deteriorating lung mechanics, depressed immune function and social factors may also contribute.

Another important factor affecting outcome is the management of older patients with respiratory infections. In older patients there are differences in presentation and causative pathogen [1]. Investigations are necessary to assess the severity of infection and management plan due to lack of physical signs and atypical presentation. We wish to share our experience of a study we conducted in older patients to examine the effect of age on investigations and use of antibiotics using British Thoracic Society guidelines as a standard [2].

We obtained records of patients admitted between March and August 1998 to our hospital with a discharge diagnosis of chest infection and pneumonia, and compared 30 younger (<80 years) with 30 older ($\geqslant 80$ years) patients in each group. All statistical comparisons were by Fisher's test.

Of 405 patients with respiratory infections, 216 (53%) had chest infection. One hundred and fifty-six (72%) of these were under 80. One hundred and five (26%) had pneumonia, 66 of whom (16%) were under 80.

Older patients were less likely to have had investigations. Figures (younger *vs* older) were: sputum, 6/30 *vs* 0/30 ($P=0.03$); liver function tests, 22/30 *vs* 13/30 ($P=0.04$); blood cultures, 17/30 *vs* 9/30 (not significant); atypical pneumonia screen, 7/30 *vs* 1/30 (not significant); and blood gases, 23/30 *vs* 10/30 ($P=0.002$). Older patients were also more likely to receive two antibiotics for chest infection (4/30 *vs* 13/30; $P=0.02$) and to receive a cephalosporin (2/30 *vs* 7/30; not significant).

In this study we found that important investigations were less likely to be undertaken in older patients, who were more likely to receive multiple antibiotics. This may partly explain the poorer outcome and the higher incidence of drug-induced side effects in older people. Older patients should receive the same standards of treatment as the young.

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The Short Form-12 by telephone as a measure of health-related quality of life after stroke

SIR—The assessment of health-related quality of life following disabling illnesses such as stroke provides an overview of the impact of deficits on an individual's daily functioning and well being, and is thus an important outcome measure in the evaluation of health care interventions [1]. Even mild stroke may affect many different dimensions of health, the impacts of which are not captured by measures such as the Barthel index [2].

The Short-Form 12 (SF-12) is a short generic measure of health-related quality of life, developed for large-scale surveys in which longer measures are not feasible [3]. As a 1-page questionnaire, it can be administered in about 2 min to most respondents [4], compared with 10 min for the longer SF-36 measure, from which it is derived. Respondent burden is further minimized by the absence of four of the six SF-36 items identified as inappropriate for older respondents (SF-36 items 3a, 3g, 3h and 3i) [5–6]. Despite these features, however, older patients, including those with stroke, appear less likely to complete the SF-12 when it is administered by post [7].

We administered the SF-12 by telephone to 45 stroke survivors, then administered the SF-36, Barthel index and 28-item General Health Questionnaire (GHQ-28) by personal interview within the next week. Those respondents independent in activities of daily living were expected to report higher physical health scores, while respondents with probable psychiatric disorder were expected to report poorer mental health.

The SF-12 physical health summary score differentiated between patients who were dependent or independent in activities of daily living, with dependent patients reporting poorer physical health—mean scores ($\pm$SD): 30.2 ± 10.7 *vs* 43.3 ± 10.3 ($P<0.001$). There was no significant difference in the reported mental health between these two groups of patients—mean scores: 51.6 ± 8.7 *vs* 54.2 ± 8.3. Both the physical and mental health scores discriminated between respondents with differing mental health status according to the GHQ-28. Respondents with a probable psychiatric disorder reported significantly poorer physical health (mean physical health summary scores: 31.7 ± 11.6 *vs* 41.2 ± 11.4; $P<0.05$) and poorer mental health (mean mental summary scores: 46.8 ± 8.2 *vs* 55.6 ± 7.4; $P<0.01$).

Given the costs associated with conducting face-to-face interviews and the poor data completion observed with postal surveys [8–9], the ability to assess health-related quality of life by telephone may facilitate health outcome research. In our study, 85% of patients who were able to be interviewed fully completed the SF-12. This is an improvement on data completion rates reported in a postal survey using the SF-12 [7]. Missing data related principally to items previously reported as problematic for older respondents (questions

4, 5 and 7) [5–6, 10]. The SF-12, therefore, appears to be feasible when administered by telephone, with a low frequency of missing data even for items previously identified as problematic for older people.

The criterion validity of the SF-12 physical health summary score by telephone was supported by its ability to discriminate patients who were dependent from those independent in activities of daily living as indicated by the Barthel index. Poorer physical and mental health was observed among those with high GHQ-28 scores. The poorer physical health associated with high GHQ-28 scores may reflect the inclusion of questions with a somatic emphasis. Although the validity of the scoring and interpretability of the SF-36 summary scores has recently been called into question [11], our results indicate that the SF-12 physical and mental health summary scores are valid indicators of health-related quality of life among patients with stroke.

In conclusion, administration of the SF-12 by telephone offers a feasible and valid measure of health-related quality of life. Since data completion is improved over postal surveys, the telephone-administered SF-12 may be the preferred method of service evaluation when general physical and mental quality of life data are appropriate.

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A trial of blood pressure reduction in acute stroke

SIR—A continuing controversy in the management of stroke is whether hypertension should be treated during the acute phase. Three-quarters of patients are hypertensive at presentation. A high blood pressure is associated with a poor outcome [1]. No large trials have specifically assessed whether blood pressure should be altered actively during the acute phase of stroke [2], although outcome was worse in some trials involving calcium channel blockers, an observation that appeared to parallel their effect on blood pressure [3, 4].

As part of the protocol development of a trial testing the effect of lowering blood pressure immediately post-stroke, we developed a questionnaire asking for definitions of blood pressure and current practice. We piloted this at the 8th European Stroke Conference (Venice, April 1999, 27 respondents) and then surveyed UK physicians with an interest in stroke (202 respondents out of 350; 58%). Data were entered into an Excel spreadsheet and analysed using Stata 5.0 (Stata Corp., TX, USA).

Respondents defined a high blood pressure as 200/110 mmHg [interquartile range (IQR) 180/100 to 220/120 mmHg] and a low blood pressure as 100/60 mmHg (IQR 95/60 to 110/70 mmHg). Levels at which physicians would routinely intervene during the acute phase were more extreme at 220/120 mmHg (IQR 200/110 to 230/130 mmHg) and 90/60 mmHg (IQR 90/50 to 100/60 mmHg). However, most physicians do not currently alter blood pressure during the acute phase of stroke unless hypotension is present (Table 1).

Table 1. Current practice: percentage of respondents who would raise, leave alone or lower blood pressure in the presence of hypertension, normotension and hypotension

	Response (%)			
	Blood pressure			
	Raise	Leave	Lower	Don't know
Blood pressure at admission				
High	0	50	26	24
Normal	0	86	0	14
Low	42	31	0	27

Nevertheless, decisions to intervene were felt to depend on factors other than just blood pressure, including the presence of previous hypertension (treat 42%, do not treat 11%, don't know 46%), known carotid stenosis (treat 17%, do not treat 25%, don't know 58%), and the type of stroke (ischaemic—treat 29%, do not treat 18%, don't know 53%; primary intracerebral haemorrhage—treat 51%, do not treat 7%, don't know 42%). In patients admitted on antihypertensive medication, more physicians would continue rather than stop it during the acute phase (continue 48%, stop 18%, don't know 34%). One hundred and ninety respondents (83%) supported the need for a randomized controlled trial to address the question of blood pressure management further.

These data confirm that current practice varies considerably and that much uncertainty exists in how best to manage blood pressure during the acute phase of stroke. Hence, a trial assessing the effect of blood pressure reduction is now urgently required; such a trial could also test whether prior antihypertensive therapy should be continued or stopped.

Physicians may contact us for further information about our planned trial: Fax: (+44) 115 840 4795; Email: enos@nottingham.ac.uk; http://www.nottingham.ac.uk/stroke-medicine/enossummary.htm.

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