How many young athletes know the potentially serious consequences of using illicit anabolic steroids?

count was $5 \times 10^9/l$ with 80% motility. Pregnancy was achieved about six months after stopping steroids.

Comment

These cases illustrate several different issues relating to steroid abuse. The great secrecy surrounding abuse hides it from doctors and even close relatives. Some body builders might even be taking steroids without their knowledge. As a result clinicians should be aware of possible undisclosed abuse. The lack of awareness of the implications of steroid abuse is shown by the polypharmacy used, the carelessness of dosage, and the young age at which the problem starts.

There are no detailed epidemiological studies available in the United Kingdom about the recreational use of anabolic steroids, most information being anecdotal. However, there is no doubt that usage is common and that the prevalence has risen in the past 10–20 years. Perry *et al*, alerted by an apparent increase in steroid users attending a needle exchange programme, estimated that 38.8% of gymnasium attenders used these drugs.¹ Identifying the true prevalence is fraught with problems which relate to the secrecy surrounding use and the illicit means by which the drugs are obtained. Our patients estimated that between 100 and 300 men regularly attended each gymnasium and that between a quarter and three quarters were taking steroids.

Adverse effects of anabolic steroids are recognised but have mostly been studied using therapeutic doses. The doses used by body builders may be up to 40 times higher than therapeutic doses. Furthermore, the multiple preparations used makes studying the adverse effects of individual drugs almost impossible. The adverse effects on male fertility described above are well known³ and are being developed for contraceptive use. It should also be remembered that other adverse effects include alteration in lipid concentrations, liver disease, jaundice, hepatic tumours, gynaecomastia, mood changes, reduced libido, dependence withdrawal effects, and prostatic carcinoma.^{4,5} Use among young

teenagers (our patients reported boys of 15 being given steroids) can have permanent effects on growth. Awareness of the increasing abuse of these drugs is thus important to all clinicians.

Data from the development of androgenic steroids for male contraception indicate that reversal of effects can take up to 12 months after stopping the drugs.² Case reports indicate that problems may persist for up to three years.^{6,7} There is no evidence that human chorionic gonadotrophin would have any protective effect, and men abusing steroids must be warned of a potential long term adverse effect.

We questioned our patients about the advice given to them about side effects. Written information was obtained from body building magazines and "underground steroid booklets." The gymnasiums gave no or very limited information. All patients reported that they were unaware of the severe side effects of steroids and would never use them again.

Our main concern is that young men are taking anabolic steroids for recreational use without knowing the potentially serious consequences. Furthermore, doctors must be made aware of the potential abuse of steroids by male patients, as this information may not be volunteered. These men are usually easily recognised by their physique and often have small testicles. Accurate history taking in these men is difficult but direct questions should be asked.

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- 1 Perry HM, Wright D, Littlepage BNC. Dying to be big: a review of anabolic steroid use. *Br J Sports Med* 1992;26:259–61.
- 2 Schurmeyer T, Knuth UA, Belkien E, Nieschlag E. Reversible azoospermia induced by the anabolic steroid 19-nortestosterone. *Lancet* 1984;i:417–20.
- 3 Knuth UA, Maniera H, Nieschlag E. Anabolic steroids and semen parameters in body builders. *Fertil Steril* 1989;52:1041–7.
- 4 Lukas SE. Current perspectives in anabolic androgenic steroid abuse. *Trends Pharmacol Sci* 1993;14:61–8.
- 5 Roberts JT, Essenhugh DM. Adenocarcinoma of prostate in 40 year old body builder. *Lancet* 1986;ii:742.
- 6 Turek PJ, Williams RH, Gilbaugh JH, Lipshultz LI. The reversibility of anabolic steroid-induced azoospermia. *J Urol* 1995;153:1628–30.
- 7 Jarow JP, Lipshultz LI. Anabolic steroid-induced hypogonadotropic hypogonadism. *Am J Sports Med* 1990;18:429–31.

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Caring for Older People

What an old age psychiatrist does

J Wattis

This is the first in a series of 14 articles edited by Eileen Burns, Neil Penn, and Graham Mulley

Mental illness is common in old age and is also often associated with physical illness and social problems, whether these be general deprivation or traumatic life events. Its detection demands vigilance and its diagnosis and management demand teamwork. This article considers three major disorders, but other problems such as drug and alcohol dependence and schizophrenia do occur, though they are mercifully rare compared with depression, delirium, and dementia.

Old age psychiatry as a specialty arose from the unique needs of old people with psychiatric disorder and the special knowledge and skills needed to deal with these needs. It differs from general psychiatry not only because of the greatly increased prevalence of dementia in older people but also because the presentation and management of other disorders is different. The pattern of work is also different. Work in interdisciplinary community mental health teams and in partnership with general practitioners, social services, and hospital doctors is a necessary response to the complicated mixture of social, psychological, and medical needs in old people with psychiatric disorder. About three quarters

of the referrals to old age psychiatrists come from general practitioners and about a quarter are liaison referrals from hospital departments.

Although old age psychiatry began as a hospital specialty, many old age psychiatrists today are based in the community and give equal emphasis to their community and hospital work. They aim to provide services that are sensitive to the needs of caregivers and patients and also support general practitioners, social services, and other hospital departments. Their work includes the direct assessment and management of disease and the provision of education and information to others working with older adults, aiming to influence the practice of others, as the prevalence of mental illness is far too high for them to deal with it all directly. Three diagnostic groups are responsible for most of the workload: depression, delirium, and dementia.

Depression

Though depression is neither more nor less common in older than younger adults, when it occurs it is more

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"Portrait of an old man, aged 93" by Albrecht Dürer

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likely to be severe and more likely to need hospital admission. The need for hospital admission probably stems from an interaction of the severity of depression, the higher proportion of old people living alone (about 50% over the age of 75 years), and the frequent coexistence of physical disorder. There is also a higher risk of suicide in old age. Clinically significant depression affects about 10% of old people in the general community, and rates are two or three times higher in selected populations like those in old people's homes or inpatient medical care. About a quarter of the depression seen is quite severe.

The risk of people developing the more severe forms of depression might be reduced by earlier diagnosis and effective treatment in general practice (see box). Helping general practitioners to be aware of treatable

Elderly people and depression

- Patients presenting with depression with physical symptoms or in association with physical illness respond well to antidepressant drugs
- The more serious side effects and risks can be minimised by prescribing newer antidepressants
- Interactions may be reduced by careful choice of drugs
- Depressed patients in general practice respond well to antidepressants—provided adequate doses are used—and some treatments for physical disorder may be less important than antidepressant treatment

depression in their older patients is a prime educational target for old age psychiatrists.

The prognosis for untreated depression is relatively poor, so why is some old people's depression undiagnosed and untreated? The evidence currently available suggests that patients and general practitioners concentrate on treatment of physical symptoms. Indeed, depression in older patients commonly presents as a series of physical problems such as insomnia, tiredness, and repeated minor aches and pains. In addition, depression is commonly associated with physical illness or bereavement and may then be dismissed as "understandable." Doctors are concerned about the side effects and risks of the older antidepressant drugs and possibly the cost of the newer ones, and about polypharmacy and drug interactions. Patients, remembering reports of problems with benzodiazepines, may worry that antidepressants are "addictive." Counselling and psychotherapy services for old people are not generally well developed, and doctors as well as patients may succumb to a feeling of hopelessness and helplessness in the face of social deprivation and multiple diseases.

A first step in improving the management of depression in older adults in general practice would be for each general practitioner to identify depressed patients either opportunistically (they tend to consult more than other patients) or through screening and to record the diagnosis in the notes. Patients who were severely depressed or who remained depressed for more than a few weeks should be considered for treatment with antidepressant drugs and the outcome monitored. Evidence from patients with more severe depression suggests that, in the majority who do respond to antidepressants, there is benefit in continuing treatment for at least two years. The evidence of benefit for continuing treatment of less severe cases is not yet established.

Monitoring, counselling, and, if necessary, antidepressant treatment can also be directed to people who are especially likely to develop depression—for example, those who are socially isolated or recently bereaved or who suffer chronic physical illness. Doctors in hospital departments for older people have a special role here, especially with the last group. A number of scales—the geriatric depression scale,^{1 2} the brief assessment scale for depression (a card sort scale),³ and the hospital anxiety depression scale^{4 5}—provide a diagnostic indicator and can also be used to measure improvement, though not all are validated as diagnostic instruments in every setting.

In the management of depression, suicide risk should always be ascertained. The patient can be asked, "Have you ever felt so bad that life was not worth living?" and further questions as necessary. If there is doubt about diagnosis, response to treatment, or suicide risk, the opinion of a consultant psychiatrist should be sought. Often the old age psychiatrist will manage depression in the community in partnership with the general practitioner and use support from the community men-

Depression in general practice

- The "average" general practitioner with a list size of 1800 and 270 people over the age of 65 will have at least 27 older patients with clinically significant depression, of whom perhaps six will be severely depressed
- Of the 27 older patients who are depressed, six will die over three years and nine will remain persistently or recurrently depressed
- General practitioners are often aware of depression in older patients who come to see them but rarely record this in their notes, prescribe medication, or refer patients with this illness
- Untreated depression in older patients at home has a poor outcome. Mortality is higher than among non-depressed people of the same age, even if the confounding effect of physical illness is allowed for; around a third of depressed older patients are depressed at three year follow up
- Suicide rates are high in old age (especially in men), and old people who attempt suicide more closely resemble those who succeed than is the case among their younger counterparts

tal health team, psychiatric day hospital for elderly people, and social services.

Where there is risk of suicide, serious self neglect (or, rarely, risk to others), or where the patient is non-compliant or resistant to treatment, hospital admission may be indicated. In hospital a full assessment will include any relevant physical illness, and treatment for those who have not responded to a simple antidepressant regimen may involve lithium augmentation, electroconvulsive therapy, and other treatment. Once a "difficult to treat" depression has resolved, follow up—including adequate continuation therapy, monitoring of compliance, and social support—is vital and will be facilitated by the care programme approach.

Delirium

Up to a fifth of older medical inpatients suffer from delirium. It presents as "confusion" or "acute confusional state." It should not be mistaken for dementia and can generally be distinguished by both its acute onset and the presence of acute physical illness. Delirium is particularly common in demented patients, in whom it can be precipitated by relatively minor physical illness and perhaps even by rapid environmental change. Whenever an older patient is seen at home with acute physical illness, delirium should be considered. If it is florid, with disturbed behaviour and hallucinations, it is likely to be noticed. Quieter forms of delirium, with subtle and fluctuating impairment of consciousness and concentration, are more likely to be missed. If they are undetected, especially if the patient lives alone, the delirium may seriously interfere with the effectiveness of treatment for the underlying physical disorder. The doctor may leave the patient at home with a prescription for antibiotics or a diuretic, not realising that the patient will forget to obtain or take the drug.

Delirium may be best managed at home in familiar surroundings, provided that there is adequate social support and the underlying illness does not require hospital services. If admission is necessary, careful management of the transition, with a familiar person accompanying the patient and repeated explanations of what is going on, can minimise the increase in confusion that is common with environmental change.

Dementia

The dementias are common, affecting around 8% of people over 65 years. Prevalence rises rapidly with age, from 2-3% in the 65-69 year age group to over 20% in the over 80s. General practitioners are aware of their patients with the more severe degrees of dementia, but milder dementias are often missed.

The main diagnoses are Alzheimer's disease, vascular dementia, and mixed Alzheimer's disease and vascular dementia. Other patients have a wide variety of

disorders, individually rare but important because they are sometimes reversible.

These "reversible dementias" include vitamin B12 and thyroid deficiency, space occupying lesions (including subdural haematoma), normal pressure hydrocephalus, and alcohol related dementia. In addition, a proportion of patients previously diagnosed as having Alzheimer's dementia or vascular dementia have neuropathological changes of diffuse Lewy body dementia. Clinically this group may be distinguished by wide fluctuations in function, extrapyramidal signs and symptoms, and possibly an increased frequency of visual hallucinations. This diagnosis is associated with an abnormal and potentially severe sensitivity to extrapyramidal side effects of neuroleptic drugs.

The exact diagnosis in dementia is of more than academic importance. Vascular dementia is associated with the risk factors for other forms of vascular disorder and may be partly preventable (by controlling hypertension or treating atrial fibrillation with warfarin). When it does occur the development of recurrent cerebral infarction may be slowed down by the use of low dose aspirin. Potentially reversible dementias, though rare, should be detected and treated as early as possible, before permanent brain damage occurs. Diagnosis is based on history, examination, and investigation.

DIAGNOSIS OF DEMENTIA

The history includes risk factors (family history, personal history of hypertension or vascular disorder) and the type of onset of the condition (sudden onset suggests delirium or vascular dementia). In regard to the time course of the condition, rapid fluctuation suggests delirium or diffuse Lewy body disorder (and sometimes subdural haematoma); stepwise deterioration suggests vascular dementia; and gradual progress suggests Alzheimer's disease.

To examine for the degree of cognitive impairment, a scale such as the modified abbreviated mental test score (AMT)⁶ can be used (box). Hypertension, evidence of vascular disease, evidence of stroke, or neurological signs suggest vascular or mixed dementia; fluctuation of concentration and level of consciousness suggests delirium or diffuse Lewy body disease. Signs of liver disease may be associated with alcohol use; signs of a mood disorder might indicate depressive "pseudodementia." Cortical dysfunction, such as dysphasia, agnosia, or apraxia, suggests Alzheimer's disease or vascular dementia, whereas subcortical dysfunction, such as cognitive slowing or forgetfulness, indicates metabolic or vascular dementia.

Routine investigation consists of metabolic screening, measurement of blood sugar, thyroid function tests, measurement of B12 (and folate), and a full blood count.

Suicide rates are high in old age, especially in men (1993 figures for 10 year age groups over 65 years; source: Office for National Statistics)

10 Item abbreviated mental test

Ask the patient:

- 1 Their age
- 2 The time (to the nearest hour)
- 3 Address—42 West Street—for recall at end of test: this should be repeated by the patient to ensure that it has been heard correctly
- 4 Current year
- 5 Name of hospital (or place the patient is being seen)
- 6 Recognition of two people
- 7 Date of birth
- 8 Years of first world war
- 9 Name of the present monarch
- 10 Count backwards from 20 to 1

Where indicated, further investigation can include tests of liver function or serological testing for syphilis. Computed tomography can be used when there are atypical features, or to confirm vascular disease or space occupying lesions; but cost and benefits need to be weighed.

MANAGEMENT OF DEMENTIA

Once the diagnosis of irreversible dementia is made (with specialist help if necessary) the issues of management begin:

- Discussing the diagnosis and prognosis sensitively with patient and caregivers
- Providing information about support services
- Providing information about financial and other legal issues
- Putting the patient and caregivers in touch with services
- Giving the patient and caregivers details of the Alzheimer's Disease Society
- Producing an agreed plan of care, which is revised as often as needed.

Doctors are often shy of discussing the diagnosis with patients, and sensitivity to the patient's wish to know and capacity to understand are central. Caregivers and even patients can be surprisingly relieved to be given the diagnosis of Alzheimer's disease: they may have suspected this for a long time, and it comes as a relief to have the diagnosis. It also enables caregivers to begin to plan for the future. Information is essential for that planning and the Alzheimer's Disease Society produces an excellent set of information and advice sheets that can be copied for patients and carers—every general practice, department of medicine for the elderly, and old age psychiatry service should have both packs. The 20 information sheets cover, among other issues, financial and legal issues; services—who can help; and drugs used for behavioural problems. In the advice series, 19 sheets cover practical topics like communication, wandering, incontinence, aggression, sexual problems, and pressure sores.

FINANCIAL MATTERS

Financial matters often cause problems. If the patient is capable of understanding it, an enduring power of attorney may be useful. If the patient is no longer able to understand this and considerable sums of money are involved, the Court of Protection may be the only option.

DIFFICULT BEHAVIOUR

Wandering, repetition, shouting, inappropriate behaviour, sexual disinhibition, and many other behaviour problems may develop as dementia advances. Each problem needs careful definition. "Wandering," for example, may describe anything from restlessness around the house to a determined commitment to walk to a former abode, even if that means crossing a motorway. An analysis of possible medical reasons for the behaviour should follow: is restlessness due to constipation;

The dementias

- Affect 1 in 12 people aged over 65 years
- Prevalence rises with age; more than a fifth of people over 80 are affected
- Severe dementia is rarely overlooked
- Milder dementia may be missed
- Delirium and depression may be misdiagnosed as dementia
- Alzheimer's, vascular, and mixed dementias are commonest
- A variety of other disorders are much less common but sometimes reversible
- Diffuse Lewy body disorder is increasingly diagnosed and important because of neuroleptic sensitivity

is incontinence due to immobility? Behaviour may also only be inappropriate because of impaired understanding—for example, the old man who tries to get into bed with a woman he mistakes for his wife. Depressed mood may produce restless or hostile behaviour. Shouting may be inadvertently reinforced if it brings attention in the otherwise impoverished environment of a nursing or residential home. Behavioural techniques may be useful, but often understanding the meaning of the behaviour for the patient is the clue to devising appropriate management.

SPECIALIST COMMUNITY MENTAL HEALTH TEAMS

Specialist community mental health teams for older adults usually include community nurses, psychiatrists, a social worker, and perhaps a psychologist or an occupational therapist. They are well equipped to deal with the more complicated diagnostic and management problems and usually provide a direct link with local day hospital and inpatient services. Most health districts now have specialist consultants in old age psychiatry, though nationally there are about 20 districts without a consultant and many are seriously understaffed for the size of the population covered.

Under the new community care provisions, social services are expected to make an assessment of the needs of anyone referred to them with mental illness (including dementia) in the community. Increasingly flexible home care services are evolving, though there continue to be funding problems.

Local branches of the Alzheimer's Disease Society are a particularly useful source of information and support to carers.

Further reading

Wattis J, Martin C. *Practical psychiatry of old age*. 2nd ed. London: Chapman and Hall, 1993.

Information and advice leaflets are available as a pack (price £4) from the Alzheimer's Disease Society, Gordon House, 10 Greencoat Place, London SW1F 1PH (tel 0171 306 0606).

- 1 Yesavage J, Brink T, Rose T, Lum O, Huang V, Aday M, *et al*. Development and validation of a geriatric depression screening scale: a preliminary report. *J Psychiatr Res* 1983;17:37-49.
- 2 Herrmann N, Mittmann N, Silver IL, Shulman KI, Busto UA, Shear NH, *et al*. A validation study of the geriatric depression scale short form. *Int J Geriatr Psychiatry* 1996;11:457-60.
- 3 Adshead F, Day Cody D, Pitt, B. BASDEC: a novel screening instrument for depression in elderly medical inpatients. *BMJ* 1992;305:397.
- 4 Kenn C, Wood, H, Kucyj M, Wattis JP, Cunane J. Validation of the hospital anxiety and depression rating scale (HADS) in an elderly psychiatric population. *Int J Geriatr Psychiatry* 1987;2:189-93.
- 5 Wattis J, Burn WK, McKenzie FR, Brothwell JA, Davies KN. Correlation between hospital anxiety depression (HAD) scale and other measures of anxiety and depression in geriatric patients. *International Journal of Geriatric Psychiatry* 1994;9:61-3.
- 6 Hodkinson HM. Evaluation of a mental test score for assessment of mental impairment in the elderly. *Age Ageing* 1972;1:233-8.

Serious self neglect may result from depression and indicate a need for admission to hospital

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