Psychiatric treatments: an exciting new century

At the beginning of the 1900s, effective psychiatric treatments were almost non-existent (Freud's discovery of the unconscious and his psychoanalysis based on this perhaps being the noteworthy exception). In many parts of the world a person with unusual behaviour was thought to be possessed by evil spirits. These demons were exorcised by such techniques as prayer, incantation, magic and the use of purgatives concocted from herbs. If these interventions were unsuccessful, more extreme measures were taken to ensure that the body would be an unpleasant dwelling place for the evil spirit. Flogging, starving, burning, and causing the person to bleed profusely were frequent forms of intervention (Atkinson et al, 1998).

DRUG THERAPIES

Midway through the century, drugs for the treatment of schizophrenia (chlorpromazine), depression (imipramine) and anxiety (chlordiazepoxide) were discovered. Lithium was rediscovered and a whole host of 'me too' compounds followed (Snyder, 1996). Knowledge of the mode of action of these compounds led to aetiological hypotheses about the nature of the disorders that they were used to treat. However, establishing whether such defects are part of the pathology or a compensatory adaptation to that pathology has been difficult.

The neuropharmacology of these compounds has often turned out to be exceedingly complicated. This led Koob (1982) to describe pharmacotherapeutics for disturbed behaviour and emotion as 'pharmacological phrenology'.

In spite of these caveats, progress has occurred in pharmacology, psychology, and the cognitive and neurosciences. Advances have also occurred through large international studies of cross-cultural psychiatry, making psychiatry a 'global agora' (Kirmayer and Jarvis, 1998), and with the realization that emotional and behavioural distress — however biological its roots — is experienced in the context of cultural and social processes (Kleinman and Cohen, 1997).

Deinstitutionalization has reduced dependence on hospital care and this has facilitated a closer working relationship between mental health and other professionals, although this approach is marred by the fact that the facilities for psychiatric patients in most communities are far from adequate.

DEPRESSION

Significant advances and new drugs have brought new hope for sufferers of psychiatric illness. In depression, the ability to develop compounds with very specific target actions has led to the development of selective serotonin reuptake inhibitors (fluoxetine and paroxetine), noradrenaline reuptake inhibitors (reboxetine) and selective noradrenergic and serotonin reuptake inhibitors (venlafaxine). It is becoming clear that the serotonin system is a crucial element in depression and, along with other biogenic amines, forms a long and complex chain of neurological deficiencies that cause depression.

The unresolved question is whether the physiological changes are the cause or the result of the psychological changes. Most cases seem to fall in between the two extremes and involve a mixture of genetic, early developmental and environmental factors. Electroconvulsive therapy (ECT) is likely to remain a treatment option for severe depression for the foreseeable future; however, a recent Royal College of Psychiatrists audit of ECT said that two-thirds of ECT clinics in England and Wales fall short of the College standards, with only one-third being regarded as good (Duffett and Lelliott, 1998).

SCHIZOPHRENIA

When first recognized in the 19th century, schizophrenia earned for itself the name of 'dementia praecox' or precocious dementia, a name that concisely captures its relentless course and poor prognosis (Kraepelin, 1919). With the discovery of the phenothiazines, the acute symptoms of schizophrenia were made more manageable; however, the drug treatment of chronic or 'negative' symptoms of schizophrenia is only now developing.

The new 'atypical' antipsychotic drugs such as clozapine and quetiapine activate the abulic features of the negative syndrome. Called atypical because they often have little or no effect on the D_2 receptor but affect the $5\text{-}HT_{2a}$ and other receptors, these new drugs are stimulating much new molecular research. With a better understanding of the natural history of many psychotic illnesses and recognition that schizophrenia is a multifactorial disease, the groundwork is being laid for further development in the treatment of this serious mental disorder.

DEMENTIA AND RARER DISORDERS

As people live longer dementia has been described as the silent epidemic with no treatment. Recently two anticholinesterases, rivastigmine and donepezil, have been shown to reverse memory changes for up to 6 months and, although they do not

affect the underlying illness, they point the way to treating what has hitherto been seen as an untreatable condition. Even in an uncommon disorder like narcolepsy, new treatment advances are occurring with a new drug, modafinil, which selectively activates the hypothalamus.

ALCOHOL-RELATED PROBLEMS

Severe alcoholism and alcohol dependence include a craving for alcohol and continued drinking despite repeated alcohol-related problems, such as losing a job or getting into trouble with the law. The neuropharmacology of alcohol is complex and involves a number of systems (Nutt, 1999) and although it has been studied intensively and much is now known, there are still many mysteries.

Alcoholism often leads to pathophysiological processes that impede the functional activity of certain neurotransmission systems, with obvious neurodegeneration. Although a cure has not yet been found, new treatments like acamprosate and naltrexone acting on gamma-aminobutyric acid (GABA) and opiate receptors have been shown to reduce craving significantly. This again is a very significant advance in a field often thought of as a therapeutic black hole.

PSYCHOLOGICAL TREATMENTS

Psychological treatments are being fully integrated in psychiatric care. Psychotherapy, a generic term, refers to a variety of verbal and non-verbal techniques, packages and procedures with the common aim of symptom removal and restoration of normal social, occupational and psychological functioning.

Cognitive and behavioural therapy have been consistently shown to be as effective as drugs for various cognitive, emotional and behavioural disorders. The thrust of cognitive behaviour therapy is symptom removal by identification and correction of the sufferer's distorted, negatively biased, moment-to-moment thinking. Theoretically, cognitive therapy aims at prevention of relapse by identifying and correcting 'silent' assumptions. For behavioural therapy, several treatment packages derived from functional analysis of behaviour and social learning are available, and techniques such as relaxation training, exposure, self-control, response prevention, thought stopping, assertiveness training, contingency management and aversion therapy are being widely used.

Although initially viewed with scepticism, both cognitive and behavioural treatments are used very successfully in psychotic disorders to reduce hallucinations and delusional beliefs. Interpersonal psychotherapy is a pragmatic but structured short-term therapy that can be learnt very quickly and is gaining popularity. Originally developed for depressive illnesses, recently it has been expanded to patients with eating disorders with proven effectiveness (Agras et al, 2000; McIntosh et al, 2000).

THE FUTURE

The past decade of the brain has seen psychiatric treatments developing more rapidly than at any time in the past. These treatments, still often discovered by chance, are also leading to further knowledge of the pathology and aetiology of psychiatric illnesses. The pace of these developments is likely to quicken, making this an exciting time for neuroscientists, psychologists and psychopharmacologists. The results of their work are being used by clinicians to significantly improve the treatment of psychiatric disorders and the lives of our patients. HM

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Agras WS, Walsh BT, Fairburn CG, Wilson GT, Kraemer HC (2000) A multicenter comparison of cognitive-behavioral therapy and interpersonal psychotherapy for bulimia nervosa. *Arch Gen Psychiatry* **57:** 459–66

Atkinson RT, Atkinson RC, Smith EE, Bem DJ, Nolen-Hoeksem S (1998) *Hilgard's Introduction to Psychology.* 12th edn. Harcourt Brace College Publishers, New York

Duffett R, Lelliott P (1998). Auditing electroconvulsive therapy. The third cycle. *Br J Psychiatry* **172**: 401–5

Kirmayer LJ, Jarvis E (1998) Cultural psychiatry: from museums of exotica to the global agora. *Curr Opin Psychiatry* **11:** 183–9

Kleinman A, Cohen A (1997) Psychiatry's global challenge. *Sci Am* **March:** 74–7

Koob GF (1982) The dopamine anhedonia hypothesis: a pharmacological phrenology. *Behav Brain Sci* **5:** 63–4

Kraepelin E (1919) *Dementia Praecox and Paraphrenia.* Livingstone, Edinburgh

McIntosh V, Bulik CM, McKenzie JM, Luty SE, Jordan J (2000) Interpersonal psychotherapy for anorexia nervosa. *Int J Eat Disord* **27**: 125–39

Nutt D (1999) Alcohol and the brain. *Br J Psychiatry* **175:** 114–9

Snyder S (1996) *Drugs and the Brain.* Scientific American Library Series, Washington

KEY POINTS

- Psychiatric treatment is moving rapidly from chance discoveries to knowledge-based treatments.
- New drugs are much more selective in their actions.
- Atypical anti-psychotics have a significant effect in chronic schizophrenia.
- Drugs can now temporarily reverse memory loss in dementia and reduce craving in alcoholism.
- Cognitive behavioural therapies are a well-established and proven treatment for emotional disorders.
- Interpersonal psychotherapy is easy to learn and effective in a wide range of disorders.