MEDICAL PRACTICE

Today's Treatment

Psychological Medicine

Schizophrenia and Related Paranoid Psychoses

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This paper considers the treatment of schizophrenia and those conditions called paranoid states. The latter include patients with delusions of a fairly fixed, elaborated kind, often with hallucinations, who do not show the same degree of personality deterioration as is found in the course of schizophrenia. The older the patient the more often paranoid state is diagnosed in preference to schizophrenia, but the relationship between these types of psychosis is not well understood. However, modern methods of treatment have much in common.

Admission to Hospital

Psychotic illness is always serious, and the patient's perception of reality may be so distorted that he needs protection. The family may increase his distress by strenuously trying to understand the incomprehensible or by rejection. He may drift away into dangerous isolation. The risk of suicide is considerable in the early stages when there is some insight and the terrifying realization of insanity. Nowadays accurate diagnosis is essential, because there are specific and effective treatments. For these reasons admission to hospital is often necessary in the acute phase of the illness.

When the decision is made it should be stated unequivocally, then admission arranged swiftly. Doubt and delay by the doctor while mentioning less appropriate alternatives forces the patient to grapple with choices when he cannot appreciate their implications. The deluded patient may wish to disagree with the doctor about the causes of his distress, but he will usually agree

he is distressed, accepting with relief that he is considered ill enough for others to want to take over and care for him. A visit to the admission ward should dispel fears and fantasies about psychiatric treatment.

Acutely psychotic patients who admit to thoughts of suicide, self-mutilation, or homicide must be admitted. Suicide is most likely in middle-aged or elderly people living alone, but young schizophrenics do kill themselves. A woman in puerperal schizophrenia expressing dark doubts about the welfare of the child should be admitted urgently. Delay is also dangerous when there is serious self-neglect, with dehydration, or sustained excitement, with exhaustion. Uncommunicative patients often accept transfer to hospital if the doctor carefully explains what is happening in the presence of a friend or relative.

Compulsory admission should rarely be necessary, but when all else fails and the patient or others are at risk, there is no need to be squeamish, for the law is there to prevent much greater tragedies than temporary loss of freedom. Just as matters of convenience should never be allowed to influence this decision, so also matters of philosophy—for example, the views of those who dispute the existence of mental illness—should not. Threatening compulsory admission in the hope of avoiding the legal formalities is misuse of the Mental Health Act. It introduces devious bargaining into an already unsatisfactory doctor-patient relationship and, if it works, deprives the patient of the legal safeguards for scrutinizing the doctor's action.

Management of Acute Phase

Specific antipsychotic remedies like phenothiazines should be avoided until diagnosis is established, for this will affect management for a long time to come. Diazepam or barbiturates will temporarily reduce tension and excitement without altering the clinical signs on which diagnosis depends.

In taking a history the physician should pay careful attention to the possibility of intellectual deterioration, fits, cerebrovascular

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incidents, and febrile or confusional episodes. Thorough physical examination is essential, because organic brain disease can present with features resembling functional psychosis. Amphetamine abuse may produce a clinical picture indistinguishable from schizophrenia, and so can alcoholism, though visual hallucinations are usually more prominent in alcoholic hallucinosis. There is a puzzling association between long-standing temporal lobe epilepsy and schizophrenia, and sometimes the psychosis has improved when toxic effects of anticonvulsant drugs and the associated folic acid deficiency have been corrected. Rare idiosyncratic reactions to drugs, including steroids, L-dopa, sulthiame, and disulfiram have been reported, in which patients developed acute paranoid psychosis shortly after starting treatment and recovered after the drug was withdrawn. Casualties from abuse of hallucinogens are not rare. Paranoid states in old age are frequently associated with impaired hearing or vision. Amelioration of these sensory deficits, when possible, can improve the prognosis.

PHENOTHIAZINES

These drugs are of proved value in the acute phases of schizophrenia and paranoid states. Though still sometimes referred to as the "major tranquillizers," they do not simply reduce anxiety and hence allow the patient to ignore his delusions and hallucinations. They have a more specific antipsychotic effect as well as reducing tension and motor overactivity. Indeed, the phenothiazines are no better than "minor tranquillizers," such as diazepam, in reducing anxiety in neurotic patients.

In terms of therapeutic efficacy there is little to choose between the various compounds with the exception of promazine (Sparine) which is ineffective. One survey showed that psychiatrists preferred chlorpromazine (Largactil) when there was hyperactivity, trifluoperazine (Stelazine) when there was withdrawal and anergia, and either of these drugs in paranoid syndromes. Thioridazine (Melleril), perphenazine (Fentazin), and the butyrophenone derivative haloperidol are also fashionable, but other drugs are little used. Large doses may be required to control the acute psychosis, but reduction to a maintenance dose of about 300 mg chlorpromazine or 15 mg trifluoperazine per day can usually be achieved within weeks. If there is little improvement in the psychosis after four to six weeks, change to another phenothiazine is often beneficial, though the reasons for this are not clear. Toxic effects are a commoner reason for having to change the drug.

UNWANTED EFFECTS

The unwanted effects occurring early in treatment include anticholinergic and antiadrenergic autonomic effects, extrapyramidal motor disorders, hypothalamic hormonal disturbances and hypersensitivity reactions.

Orthostatic hypotension, blurring of near vision, dry mouth, impotence, micturition difficulties, and drowsiness are most often a problem with chlorpromazine and thioridazine immediately after starting treatment, though tolerance usually develops within days. Parkinsonism develops gradually during the first two weeks of treatment but can be controlled with benzhexol 2-5 mg three times a day. It is most troublesome in old and brain-damaged patients, but is least likely with thioridazine and increasingly common with chlorpromazine, trifluoperazine, perphenazine, and haloperidol respectively. Akathisia (*Gr.* cannot sit) is a hyperkinetic extrapyramidal disorder, commoner in women than men which begins in the early weeks of treatment. There is co-ordinated general motor restlessness, often with insomnia, and it is important to distinguish this from agitation due to an exacerbation of the psychosis requiring an increase in phenothiazine dosage. The patient perceives the movements as purposeless and describes them not so much in terms of subjective anxiety but more objectively: "my legs won't

keep still... something keeps me moving... it keeps me awake." Antiparkinson drugs like benzhexol are of doubtful efficacy, but spontaneous remission often occurs. If the disorder is severe or persistent, reduction of dosage or substitution of another phenothiazine is usually effective. Dystonic reactions are slowly sustained and often painful contractions of groups of muscles (torticollis, oculogyric spasms, extension and rotation of limbs and trunk) which occasionally occur in the first days of treatment, particularly in young men. The patient's description and appearance may seem so bizarre as to lead the unwary to consider it catatonic or hysterical. Intravenous Kemadrin (procyclidine hydrochloride) 10 mg will produce immediate relief and oral antiparkinson drugs or reduction of phenothiazine dosage will prevent recurrence.

Slight lactation and more rarely gynaecomastia can be worrying for male patients on chlorpromazine or thioridazine. Since the breast swelling may be irreversible, substitution of trifluoperazine is indicated. Similarly, menstrual irregularity or amenorrhoea can be a problem in women and weight gain in both sexes. Photosensitive skin reactions are common in patients taking chlorpromazine in hot weather, but can be prevented by avoidance of sunlight or use of an ultraviolet barrier cream such as Uviestat. The very rare hypersensitivity reaction to chlorpromazine of biliostatic jaundice always means the drug should be changed.

SCHIZO-AFFECTIVE STATES

These present a somewhat more complex treatment problem. Phenothiazines rather than antidepressants are more likely to be effective in patients under 40 who have persistent depression of mood, appetite, and energy with schizophrenic symptoms. However, if mood does not improve, a course of electric convulsion therapy (E.C.T.) may also be required to terminate the illness. In older patients paranoid delusions and hallucinations are often secondary to depressive illness, for which antidepressants and E.C.T. are appropriate treatments. However, when depressive symptoms supervene in a chronic paranoid psychosis, phenothiazine medication should be continued along with any specific antidepressant treatment which may be indicated. Phenothiazines are indicated in mania as well as schizophrenia, so there is no problem in deciding how to treat the excited, elated patient with schizophrenic symptoms. However, prognosis and therefore long term treatment are less certain. When severe excitement does not quickly respond to phenothiazines, 2 or 3 E.C.T. sessions usually produce rapid improvement. In the past E.C.T. was used much more frequently in the treatment of schizophrenic and paranoid states, but it is now clear that the indications are very limited.

Psychotherapy

Proper social and psychological management complements drug treatment in controlling the acute psychosis, and the patterns established during the acute phase are often more important than drugs in determining long-term outcome. These patients have very high levels of physiological arousal and are super-sensitive to their social environments even when outwardly they seem detached and inert. Close, emotionally charged interpersonal situations and exploration of the patient's internal mental life should be avoided because, this increases tension and aggravates the psychosis. Hence many forms of psychotherapy are contraindicated, though counselling aimed at helping the patient to learn which of his beliefs and experiences are not understood by others is of value. A bleak unstimulating environment is also harmful, leading to atrophy of social skills, apathy, and low self-esteem. Long periods doing nothing or passively watching television should be avoided. An active but predictable social milieu which encourages the patient to progress gradually towards his optimal level of social functioning is the ideal. Some

patients will have been socially isolated and unemployed for long periods before presenting for treatment. They will need to relearn and practise social and other skills with the support of sensitive and patient therapists.

Maintenance Drug Therapy

The question of how long phenothiazine therapy should be continued is still being evaluated. Increasingly the evidence suggests that maintenance therapy does reduce the frequency of relapse because it has a protective effect against the social stresses to which these patients are so sensitive. This is not a "chemical strait-jacket" effect, as some critics have suggested, because many patients are more active and sociable on phenothiazines. The benefits of continuing treatment indefinitely must of course be balanced against the risks of serious toxic effects. Exceptions to the general rule of giving long-term maintenance therapy are schizophrenia with a good prognosis, and schizophrenia or paranoid states in which the prognosis is so poor that prolonged institutional care is unavoidable.

GOOD PROGNOSIS

In schizophrenia a good prognosis is likely for patients with good premorbid personality who suddenly become psychotic, with marked mood disturbance, after some major stress such as bereavement or a surgical operation. If the psychosis quickly responds to treatment, phenothiazines should not be continued indefinitely. However, medication is often considered necessary for 6 to 12 months after the acute illness to protect the patient while he is facing the stresses of leaving hospital, returning to work and normal social life, and adjusting to any changes in life brought about by the event which precipitated the illness. Thereafter the patient is always at risk of relapse, and short courses of phenothiazine may be indicated when potentially stressful events can be anticipated but not avoided.

POOR PROGNOSIS

Institutional care for long periods is still a real necessity for some severely disabled chronic psychotics. When stabilized in such sheltered environments many patients can have their phenothiazines withdrawn without deleterious effects. These patients are often ageing and there may be associated cerebral disease, so withdrawal of drugs should be tried, because it is just such patients who are most at risk of irreversible neurotoxic effects. Reinstitution of treatment may be required when new initiatives in rehabilitation are planned or if there is exacerbation of the psychosis. Some increase in anxiety and motor restlessness should be expected after cessation of phenothiazine therapy, but this declines over a period of six weeks.

INTERMEDIATE PROGNOSIS

Most patients fall between these extremes, and maintenance therapy outside hospital reduces the risk of relapse. A common cause of relapse is failure to take the prescribed tablets. A major contribution to treatment has been the introduction of long-acting depot injections like fluphenazine decanoate (Modectate). The fact that patients have to visit their doctor for the injection every two to four weeks ensures that their clinical state and social needs are regularly reviewed. A test dose given in hospital is the safest way of initiating this treatment because extrapyramidal effects can be severe, but patients followed up by their general practitioner do just as well as those attending psychiatric clinics. Some patients become depressed and lethargic on fluphenazine decanoate, in which case flupenthixol decanoate (Depixol) is a useful alternative. In old age few but the very robust can tolerate

long-acting depot preparations, but a single small daily dose of trifluoperazine 4-6 mg may be all that is required.

Though many patients require concurrent antiparkinson remedies at the beginning of treatment, the drug can usually be withdrawn after a few months without there being recurrence of parkinsonism.

TOXIC EFFECTS

Prolonged phenothiazine therapy can have irreversible toxic effects. Tardive dyskinesia is a choreoathetoid hyperkinetic disorder predominantly affecting the tongue, lips, face, and jaw which, if severe, is very unsightly and interferes with speech, swallowing, and respiration. Its occurrence has been positively associated with long-term phenothiazine therapy and particularly affects old, brain-damaged women. The involuntary movements often increase for a few weeks after stopping treatment, then persist for months or indefinitely. Early detection is made more difficult by the fact that the disorder may be partially or completely masked by the hypokinetic effect of the phenothiazine. Antiparkinson drugs are useless, and though reinstitution of phenothiazine medication, particularly thiopropazate (Dartalan), may reduce the movements, this may eventually make them worse. Patients should be carefully observed for early signs of continuous chewing and lip-smacking, and in the brain-damaged, who are particularly at risk, there may be a case of regular short periods off drugs to unmask the early signs. The patient himself is often the last to notice.

High doses of chlorpromazine or thioridazine taken for long periods may lead to deposition of a phenothiazine pigment metabolite in the tissues. Most serious are the cases of blindness due to retinal deposits in patients treated with thioridazine in excess of 1500 mg per day. Opacities in the optic lens may occur with either drug. A slate grey-brown discolouration of the skin is fairly common, and there have been some equivocal reports of sudden death attributed to pigment deposits in the conducting tissues of the heart.

More research needs to be done, but after almost 20 years of widespread use it seems reasonable to conclude that the benefits of long-term phenothiazine therapy far outweigh the risks in appropriately selected patients.

Social Treatment

The accumulated evidence from several studies indicates that there is a narrower than normal spectrum of social stimulation within which these patients can function optimally. At work and at home too much and too little social involvement can be harmful.

WORK

Very rigorous rehabilitation programmes in which the patient is subjected to rapidly changing demands and constant criticism can provoke florid symptoms of the psychosis. On the other hand, when there are very low expectations and little interest is shown by others, social withdrawal and very low efficiency may result because the patient has not sufficient drive and initiative of his own. Rehabilitation plans must be tailored to the individual patient, but in general a graded, predictable programme of carefully monitored but increasing demands produces the best results when this is supervised by people who are able to show sustained interest and encouragement in a non-intrusive and non-critical way. Initially, suitable conditions of work may only be obtainable in a hospital industrial unit or industrial rehabilitation unit. However, if the patient has been recently employed his employers may be willing and able to promote such conditions for a period.

If the illness begins in youth, education and vocational

training may be seriously disrupted. The patient and his family may have to be helped to accept less ambitious aspirations than they had formerly held. However, the wide range of opportunities available through adult education schemes and Government training centres provides ways and means of overcoming this kind of handicap.

The attitudes of those close to the patient are of crucial importance. Lack of self-respect, apathy about the future, depression, and resentment often reflect the way others see him. Such pathological attitudes and symptoms are also found in the long-term unemployed and physically disabled and can be the largest single factor preventing rehabilitation. Emotional flattening, poverty of ideas, and social withdrawal are clinical components of the illness, but such symptoms are always more severe in patients who have had the misfortune of poor social care from those with hopeless attitudes about this kind of illness. Prevention of these secondary handicaps is far easier than cure.

FAMILY LIFE

An early follow-up study showed that relapse was more common in patients discharged from hospital to live with family members with whom there were likely to be close emotional ties than in

patients discharged to lodgings, where there was probably more restricted social contact. Subsequent studies have indicated that high emotional involvement is not in itself harmful, but more the kind of emotion expressed by the family. Only when the family were openly critical of the patient was relapse more likely. This was especially so when there was much face to face contact between the patient and his family (more than 35 hours per week). This does not inevitably lead to the conclusion that doctors should encourage patients, whose family life may be harmful, to break strong bonds which exist with parents or spouse. Work with the patient's family aimed at reducing dissatisfaction and emotional tension may reduce the likelihood of deterioration and recurrence of psychotic symptoms. Helping the family to recognize that too much contact can be harmful might be therapeutic if it allows the patient more freedom to retreat when necessary.

Some patients, particularly the old and paranoid, may have no social contacts in the community. Isolation rather than over-involvement is their problem. A wide range of hostel accommodation, day hospitals, and other social facilities are necessary to maintain these patients in the community. Zealous policies for early discharge of patients from hospital can do more harm than good if they are not linked with adequate facilities for social care.

Occasional Survey

Diagnosis of Hypothyroidism: A Comparison of Statistical Techniques

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Summary

From replies to a postal questionnaire used in a radioactive iodine follow-up scheme patients had to be classified as either "suspected hypothyroid" or "euthyroid." A comparison has been made of the effectiveness of published statistical techniques in making this classification.

Two main conclusions emerged. Firstly, all except one of the methods identified an acceptable proportion of the hypothyroid patients, and, secondly, the results given by these methods were remarkably similar. Thus the simplest, which required only a count of the number of symptoms present, was selected for use.

Introduction

The introduction of computers into medicine has brought increasing interest in statistical methods of diagnosis. A variety of these "diagnostic" methods have been devised and applied to

clinical problems such as congenital heart disease,¹ thyroid disorders,^{2,3} jaundice,⁴ and abdominal pain.⁵ The philosophies and assumptions underlying the methods differ, and it might be expected that their diagnostic abilities also differ. We report here our comparison of the performance of some published methods when applied to the same data.

Data and Methods

The data for the investigation were obtained from the Birmingham follow-up of thyrotoxic patients treated with radioactive iodine. The follow-up scheme depends on a serum protein bound iodine (P.B.I.) measurement carried out at intervals of 21 months, and a postal questionnaire which is sent to each patient nine months before the P.B.I. measurement is due.⁶ At the time the follow-up was initiated the P.B.I. was the best biochemical measure of thyroid function available for large-scale use, but it has been replaced by more specific and sensitive measures. The replies to the questionnaire (fig. 1) indicate the presence or absence of nine symptoms of hypothyroidism, the presence of symptoms being inferred from negative answers to the first and third questions and positive answers to the remainder. From these replies a diagnosis of "euthyroid" or "suspected hypothyroid" is made. For patients with the former diagnosis no action is taken until their next P.B.I. measurement becomes due nine months later. Patients with suspected hypothyroidism are referred immediately for P.B.I. measurement, and thereafter if either the P.B.I. is below 3.3 pg/100 ml or the questionnaire reply is known to be associated with a high frequency of hypothyroidism the patient is referred back to the consultant responsible for the initial treatment. If, as a result

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