ABC of mental health

Schizophrenia

Trevor Turner

Schizophrenia is a relatively common form of psychotic disorder (severe mental illness). Its lifetime prevalence is nearly 1%, its annual incidence is about 10-15 per 100 000, and the average general practitioner cares for 10-20 schizophrenic patients depending on the location and social surroundings of the practice. It is a syndrome with various presentations and a variable, often relapsing, long term course.

Although schizophrenia is publicly misconceived as “split personality,” the diagnosis has good reliability, even across ages and cultures, though there is no biochemical marker. Onset before the age of 30 is the norm, with men tending to present some four years younger than women. Clues as to aetiology are tantalising, and management remains endearingly clinical.

Aetiology

Evidence for a genetic cause grows stronger: up to 50% of identical (monozygotic) twins will share a diagnosis, compared with about 15% of non-identical (dizygotic) twins. The strength of genetic factors varies across families, but some 10% of a patient's first degree relatives (parents, siblings, and children) will also be schizophrenic, as will 50% of the children of two schizophrenic parents.

Premorbid abnormalities of speech and behaviour may be present during childhood. The role of obstetric complications and viral infection in utero remains unproved. Enlarged ventricles and abnormalities of the temporal lobes are not uncommon findings from computed tomography of the brain. Thus, a picture is emerging of a genetic brain disorder, enhanced or brought out by subtle forms of environmental damage.

Clinical features

Positive symptoms and signs

These are essentially disordered versions of the normal brain functions of thinking, perceiving, formation of ideas, and sense of self. Patients with thought disorder may present with complaints of poor concentration or of their mind being blocked or emptied (thought block): a patient stopping in a perplexed fashion while in mid-speech and the interviewer having difficulty in following the speech are typical signs.

Hallucinations—These are false perceptions in any of the senses: a patient experiences a seemingly real voice or smell, for example, although nothing actually occurred. The hallmark of schizophrenia is that patients experience voices talking about them as “he” or “she” (third person auditory hallucinations), but second person “command” voices also occur, as do olfactory, tactile, and visual hallucinations.

Delusions—These are false beliefs held with absolute certainty, dominating the patient's mind, and untenable in terms of the sociocultural background. Delusions often derive from attempts to make sense of other symptoms such as the experience of passivity (sensing that someone or something is controlling your body, emotions, or thoughts). Typical experiences are of thoughts being taken or sucked out of your head (a patient insisted that her mother was “stealing her

Symptoms are characterised most usefully as positive or negative, although the traditional diagnostic subcategories (hebephrenic, paranoid, catatonic, and simple) have mixtures of both

Clinical features suggesting diagnosis of schizophrenia

- Third person auditory hallucinations
  - Running commentary on person's actions
  - Two or more voices discussing the person
  - Voices speaking the person's thoughts
- Alien thoughts being inserted into or withdrawn from person's mind
- Person's thoughts being broadcast or read by others
- Person's actions being caused and controlled by some outside agency
- Bodily sensations being imposed by some outside agency
- Delusional perception (a delusion arising suddenly and fully formed in the wake of a normal perception)

Note

These features, termed “symptoms of the first rank” by Schneider, suggest a diagnosis of schizophrenia. However, they are not necessary for the diagnosis, and they have neither aetiological nor prognostic importance

brain”) or inserted into your mind or of your thoughts being known to others (respectively termed thought withdrawal, thought insertion, and thought broadcast). Cult beliefs in telepathy and mind control may relate to partial forms of these experiences.

Negative symptoms

These involve loss of personal abilities such as initiative, interest in others, and the sense of enjoyment (anhedonia). Blunted or fatuous emotions (flat affect), limited speech, and much time spent doing nothing are typical behaviours.

Forms of schizophrenia

Paranoid schizophrenia, the increasingly common form, is dominated by florid, positive symptoms, especially delusions, which may build up into a complex conspiracy theory that seems initially quite credible. The term paranoid has a broader meaning than persecutory, defining a sense of things around you having special, personal significance. Thus, car lights flashing may be evidence that the IRA are following you or proof that Princess Diana is in love with you. The more bizarre the beliefs, the easier the diagnosis.

In contrast, those presenting only with negative symptoms are described as having simple schizophrenia, while hebephrenia is a mix of negative and positive symptoms with insidious onset in adolescence.

The early stages of schizophrenic illnesses can vary considerably. A typical presentation is a family's concerns that a personality has changed or an insistence that a son “must be on drugs.” A decline in personal hygiene, loss of jobs and friends for no clear reason, and depressive symptoms mixed with a degree of ill defined perplexity are all common. About one in 10 sufferers commit suicide, usually as younger patients. It is relatively rare for sufferers to assault others.

Diagnosis

Presentations evolve over time, from non-specific depression or anxiety into overt psychotic states with typical symptoms. Differential diagnosis is limited, but routine blood tests, a urine screen for drug metabolites, and special investigations are useful to exclude rarer conditions. Temporal lobe epilepsy, cerebral lesions, hypothyroidism (in older patients), and systemic lupus erythematosus are possibilities. The hallucinations associated with alcoholism, illicit drugs, and medications should also be considered.

Management

Management requires pharmacological, psychological, and social approaches, depending on the stage of the illness.

Drug treatment

Early treatment with antipsychotic drugs is central to resolving unpleasant symptoms and social impairment. First line treatment requires dopamine blocking drugs such as haloperidol, chlorpromazine, trifluoperazine, sulpiride, and pimozide. Some are available only as oral preparations, and they vary in their sedating and arousing properties as well as side effects.

Continuing treatment—Depot injections giving slow, stable release of drugs over one to four weeks are extremely useful. They enhance compliance, a particular problem in those patients who lack insight. Relief of symptoms is achieved in at least 70% of patients with such treatment.

Classification of the major psychotic disorders*

F20 Schizophrenia

F22 Persistent delusional disorders

Characterised by delusions but without schizophrenia-like symptoms and little deterioration in personality
Includes the disorders previously termed paranoid psychosis and paraphrenia

F23 Acute and transient psychotic disorders

Mixed group of disorders with an acute onset, which may be stress related, and a brief clinical course
Includes syndromes previously called psychogenic, reactive, and schizophreniform psychoses

F25 Schizoaffective disorders

F30 Manic episode

Hypomania is a mild form without psychotic features

F31 Bipolar affective disorder

Previously termed manic-depressive psychosis
Psychotic symptoms may occur in both manic and depressive phases of illness but are not invariably present

Notes

The disorders listed above are characterised by the presence of psychotic symptoms (delusions and hallucinations). Such symptoms may occur in many mental disorders, including dementias and depression. Schizotypal disorder (F21) is also classified in this group but is regarded by many as primarily a disorder of personality

*World Health Organisation. *The ICD-10 classification of mental and behavioural disorders*. Geneva: WHO, 1992

Diagnosis remains a clinical skill, requiring a good social history corroborated by others as well as a detailed assessment of the patient's mental state

Advantages of early recognition and treatment

Minimises

- Subjective distress
- Positive symptoms
- Anxiety and depression

Reduces

- Frequency of relapse
- Cognitive deterioration
- Loss of personal self care skills

Limits

- Social disruption and deterioration
- Loss of family support and social networks
- Loss of interpersonal skills

Side effects are a particular problem, especially those affecting movement. Parkinsonian symptoms require antimuscarinic drugs (such as procyclidine or orphenadrine) in a third or more of patients. Sedation or a sense of feeling flattened or depressed may also be distressing. Restlessness, either psychological or affecting the legs (akathisia), is poorly understood but can respond to β blockers. Benzodiazepines usefully treat common problems such as excessive arousal or anxiety or difficulties in sleeping.

Newer “atypical” antipsychotic drugs, such as clozapine or risperidone, have an additional blocking action on serotonin receptors that seems to reduce side effects and negative symptoms. Development of such “cleaner” drugs is one of the most exciting aspects of research in managing schizophrenia.

Psychological treatment

Psychological interventions have centred on work with individual patients to develop social skills. Relapse in schizophrenia seems closely associated with the level of the family's emotional expression as measured by formal assessments of critical comments or expressed hostility in family interviews. Identifying an overinvolved, somewhat angry, and garrulous mother is not difficult.

Fashionable theories of causation in the 1960s, which designated the “schizophrenogenic” parent, have now been discarded. There is, however, a close association between high arousal in the family and early relapse: this can be lowered by structured family education, reducing face-to-face contact via attendance at a day centre, and formal family therapy. Recently, cognitive therapy to reduce the impact of delusional beliefs or hallucinations has shown promise.

Social support

A key worker can help with medication, disability benefits, and housing needs. Hostels or group homes vary in structure and support, from the high dependence units that provide 24 hour care to the semi-independence of a supported flat with someone visiting daily or less often. Day care, whether an active rehabilitation unit aimed at developing job skills or simply support with low key activities, can improve personal functioning (for example hygiene, conversation, and friendships) as well as ensuring early detection of relapse.

There is evidence that targeted community support may reduce the need for respite crisis or compulsory admissions. However, the myth that community care supplants the need for hospital beds is being superseded, particularly where there are high levels of homelessness, such as in the inner cities. A ratio of one acute bed for 10 community placements is probably acceptable.

Prognosis

Prognosis depends on presentation, response to treatment, and the quality of aftercare. Early and continued medication remains the key to good management. Acute onset over several weeks rather than many months, a supportive family, personal intelligence and insight, positive rather than negative symptoms, a later age of onset (over 25 years), and a good response to low doses of drugs are indicative of a better outcome. By contrast, the worst case scenario would be an insidious illness over several years in a teenager from a disrupted family who shows possible brain damage or additional learning difficulties.

What is clear is that the residual population of the old asylums—incontinent, mute, and utterly dependent—is a thing of the past. However, a younger group of constantly relapsing

Side effects of antipsychotic drugs

Immediate

- Acute dystonias and dyskinesias
- Sedation
- Dry mouth
- Hypotension
- Akathisia
- Constipation
- Oculogyric crisis
- Neuroleptic malignant syndrome

Medium term (weeks)

- Raised prolactin concentrations, leading to: Amenorrhoea, Subfertility, Impotence
- Prolonged QTc interval and dysrhythmias
- Weight gain

Long term (months)

- Tardive dyskinesia

Psychological interventions can minimise distress and reduce frequency of relapse

Psychological and social interventions

With patient

- Training in personal hygiene and self care
- Training in social skills
- Training in budgeting and daily living
- Training in job skills
- Training in anxiety management
- Cognitive therapy for delusions and hallucinations

With patient's family

- Information and support
- Education about illness and its effects
- Telephone helpline for out of hours support
- Self help and carers groups
- Family therapy to reduce high expressed emotion

Social interventions are the cornerstone of community care

Outcome in schizophrenia

Highly dependent

Up to 20% of sufferers will require long term, highly dependent, structured care, sometimes in locked or secure conditions

Relatively independent

About half of patients can live relatively independent lives, with varying levels of support, but require continuing medication

Independent

The best 30% are independent, working full time, and raising families. Illness with such a good outcome is sometimes termed schizoaffective, and there is continuing debate about the relation between chronic, “process” schizophrenia and those brief psychotic episodes that leave people largely untouched

patients ("revolving-door patients") shows the limitations of community support. Failure to comply with medication is often a key factor, and research into improving compliance in the community is showing some success.

Outlook

The development of local guidelines and supportive general practices or psychiatric liaison clinics are both educational and effective. Stigma and media hype of isolated assaults (such as the Christopher Clunis affair) tend to mask the good stability and personal functioning of the great majority of patients. Human resources in the form of community psychiatric nurses, social workers, occupational therapists, and care workers are often underestimated as well as underfunded.

Excellent information is obtainable from voluntary groups such as the National Schizophrenia Fellowship or the Hearing Voices Network. New drug and psychological treatments, as well as research insights into the differing syndromes and symptoms, give hope for the future.

Mania and other psychoses

Psychotic symptoms, often indistinguishable from those seen in schizophrenia, occur in manic-depressive illness. Mania typically presents with hyperactivity, an elevated or excessively irritable mood, sleep loss, pressure of speech, and a tendency to jump from topic to topic (flight of ideas). The latter may mimic forms of thought disorder, while grandiose beliefs (often delusional) may generate excess spending or a chaotic personal lifestyle. Hypomania is the term applied to a less severe form without psychotic features.

Modern classification systems recognise the existence of acute and transient psychotic disorders, often occurring in association with stress, which may resolve spontaneously in a few days or weeks. On the other hand, persistent delusional disorder is characterised by circumscribed delusional beliefs of long standing in the absence of other psychotic features or of intellectual deterioration. Schizophrenic or manic symptoms may arise in a range of infective disorders (such as malaria and HIV infection), metabolic disorders (such as hypothyroidism), and idiopathic cerebral disorders.

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Schizophrenia remains a diagnostic, clinical, and rehabilitative challenge

Voluntary organisations

- National Schizophrenia Fellowship (NSF), 28 Castle Street, Kingston upon Thames, Surrey, KT1 1SS
Telephone (0181) 547 3937, Advice Service (0181) 974 6814
Publishes a useful leaflet for patients and families: *What is schizophrenia?*
- Schizophrenia: A National Emergency (SANE), 199-205 Old Marylebone Road, London NW1 5QP
Saneline (0171) 724 8000 and 0345 67 8000
- The Manic Depressive Fellowship has active local groups in many areas
- MIND (National Association for Mental Health), Granta House, 15-17 Broadway, Stratford, London E15 4BQ
Info-Line (0181) 522 1728 and 0345 660 163

Further reading

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Introduction to general practice

For want of better

It was a small town (population 900) in rural Western Australia, and there had not been a doctor there for years. Two hours ago I had arrived to change all that. The man who got out of the pick up that stopped in front of the house asked if I was the new doc. There was a boar hound in the back of the van that had been gashed by a wild boar during that day's hunt. Could I stitch the dog up?

From being a medical registrar at the Middlesex Hospital I had become a general practitioner; so I had a brand new, very sophisticated doctor's case, with drawers full of sutures and things. The tail board of the pick up was put down; on blood soaked sacking was the boar hound, his scrotum ripped open but still, in spite of his loss of blood, looking rather lively and bad humoured

around the eyes and teeth. His owner promised to take care of the front end if I took care of the rear; he kept his word. My training as house surgeon for six months on a thoracic surgical firm told me that one testicle needed to come out; the scrotum was stitched up.

When I looked up there was a row of gaping 4 and 5 year olds. The hound's owner shook my hand and said he hoped I would remember to send him a bill. As he was about to get into his van, he turned and called back to me: "Sorry to trouble you on a Saturday arvo, doc; I called round at the cobbler's first, but he was out."

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