Management of acute psychosis

Acute psychosis is a medical emergency often associated with serious risk. GPs need to evaluate the level of risk of a patient presenting with acute psychosis and a carry out a physical assessment, if possible. Management will usually involve referral of the patient to specialist services, but when this is not possible, treatment may need to be initiated by GPs.

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Patients who present to GPs with acute psychosis always pose a serious challenge. As risks may be present to both the patient (self harm, suicide, underlying physical illness) and to others (particularly aggression and violence), an immediate risk assessment and risk management are mandatory.

A history and mental state assessment, as well as a physical assessment if possible, need to be undertaken. Presentations of psychosis in general practice will not infrequently involve organic brain syndromes (caused by a physical illness or the effects of psychotropic drugs), which need to be recognised and specifically treated.

There will be many circumstances in which GPs are unable to access specialist services, such as in rural settings. Alternatively, some patients with acute psychosis will refuse to see a specialist and their level of risk will be low enough that involuntary treatment is not necessary. In such circumstances it is entirely appropriate for GPs to initiate management.

IN SUMMARY

- **Patients with acute psychosis require an urgent clinical evaluation, risk assessment and risk management. Referral of the patient to specialist psychiatric services and involuntary hospitalisation need to be considered.**
- **Recognition of early prodromal or prepsychotic symptoms may enable intervention when the patient still has insight and is more amenable to treatment. The trauma of acute psychosis and possibly hospitalisation may therefore be prevented and long-term outcome improved.**
- **The diagnosis of psychosis in general is far more important for treatment in the short term than diagnostic distinctions between various subcategories of psychosis.**
- **Antipsychotic medication is essential for the treatment of psychosis. It reduces and eliminates positive psychotic symptoms such as delusions, hallucinations, formal thought disorder and bizarre behaviour.**
- **Some patients may require immediate intervention with tranquillising medications, such as sedative antipsychotics or benzodiazepines, in order to control acutely disturbed behaviour.**
- **Mood stabilisers and antidepressants are useful in patients with mania, psychotic depression and schizoaffective disorder, in addition to antipsychotic drugs.**

Table 1. Causes of acute psychosis

Illnesses (primary causes)

- Schizophrenia (including schizophreniform disorder)
- Schizoaffective disorder
- Bipolar mania and mixed affective states
- Major depression
- Delusional disorder (paranoid psychosis)

Physical causes (secondary causes)

Medications and substances

- Amphetamine, stimulant, hallucinogen or cannabis use
- Corticosteroid treatment
- Alcohol intake

CNS pathology

- Cerebral trauma
- Cerebral tumour
- Cerebrovascular disease
- Temporal lobe epilepsy
- CNS infections – e.g. HIV infection
- Huntington's disease
- Dementias
- Inflammatory conditions – e.g. systemic lupus erythematosis
- Demyelinating conditions – e.g. multiple sclerosis

Endocrine disorders

- Cushing's disease
- Thyrotoxicosis
- Hyperparathyroidism

Vitamin and toxic disorders

- Vitamin B group deficiencies
- Wilson's disease
- Heavy metal poisoning

Management of acute psychosis

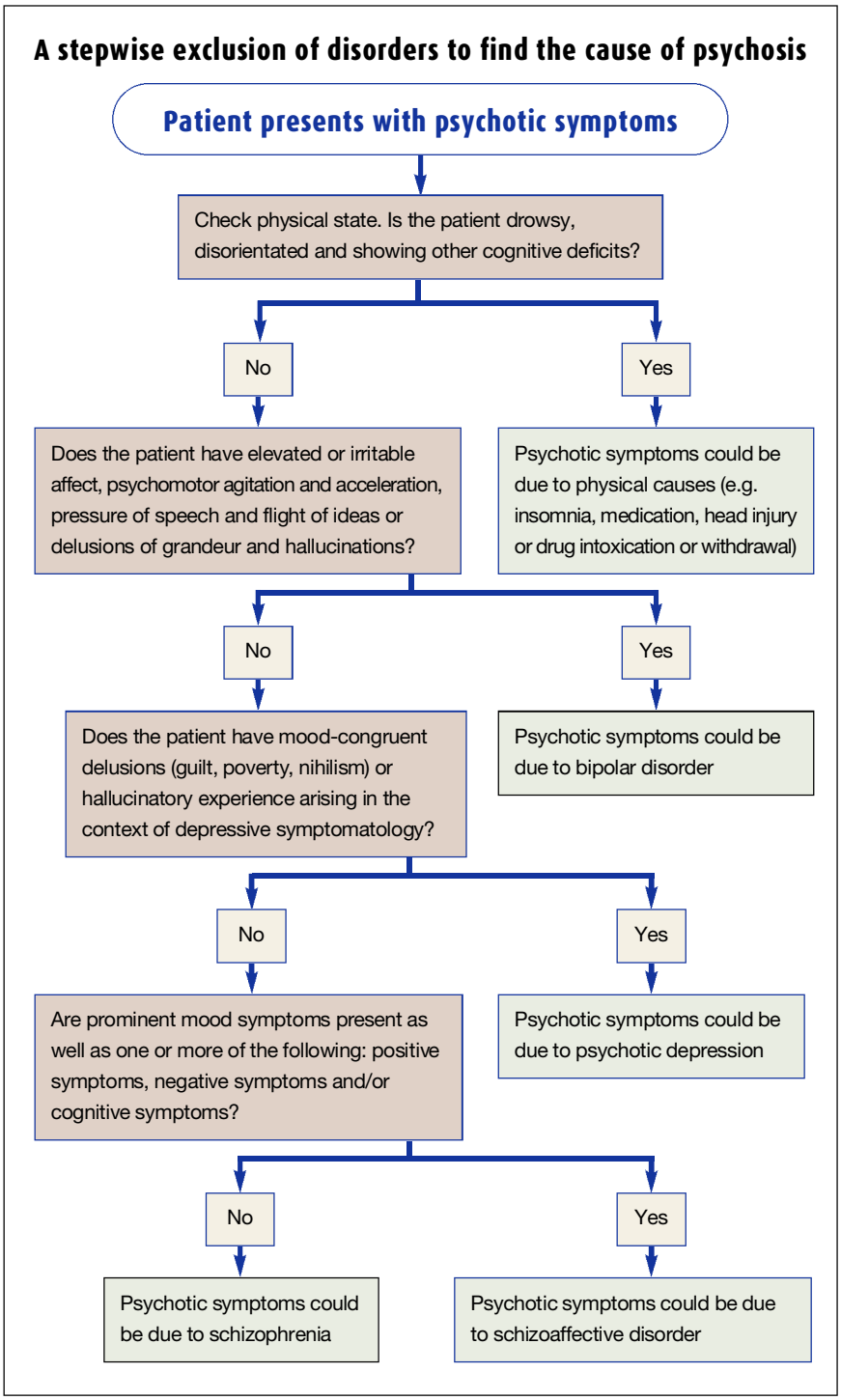
Patients with acute psychosis require an urgent clinical evaluation, risk assessment and risk management. The diagnosis of psychosis is hierarchical and depends on a stepwise exclusion of disorders; however, the recognition of early prodromal or prepsychotic symptoms may enable early intervention when the patient still has insight and is more amenable to treatment.

Causes of psychosis

The term psychosis refers to an illness in which symptom such as delusions, hallucinations, thought disorder and loss of appreciation of reality will be present. People with psychosis usually have illnesses such as schizophrenia, mania and psychotic depression. However, a physical illness affecting the brain can result in delusions, hallucinations and disturbed behaviour; an extensive list of secondary causes of psychosis should also be considered and excluded (Table 1).

The different causes of acute psychosis are presented in the flowchart on page 16. The diagnosis is hierarchical and depends on a stepwise exclusion of disorders until the residual category of schizophrenia is reached. It is important to recognise the presence of psychosis in patients with an acute presentation. Precise diagnostic categories within

the group of psychoses have indistinct boundaries and are prone to change between illness episodes. The most practical definition of psychosis relates to the link between dopamine dysregulation in the brain and psychotic symptoms within what is referred to as 'the schizophrenia spectrum'.



Symptoms of psychosis

The classic symptoms of acute psychosis are the so-called positive symptoms such as delusions, hallucinations (which are usually auditory in functional psychosis), thought disorder (loose associations, tangentiality, incoherence) and bizarre behaviour. Acute psychosis can also present with mood elevation, depression or a combination of the two in a mixed affective state, which is characterised by psychomotor agitation (Table 2).

Both positive and mood symptoms tend to be responsive to treatment with antipsychotic medication. In contrast, negative symptoms (e.g. flat affect, poverty of speech, amotivation, anhedonia) and cognitive dysfunction, which are characteristic of chronic psychotic states and tend to be treatment resistant. Anxiety and suicidal and aggressive behaviour may also occur.

Patients presenting with mania have elevated or irritable affect, psychomotor agitation and acceleration, pressure of speech and flight of ideas and may have delusions of grandeur and hallucinations such as hearing the voice of God. Mania that is not due to a physical cause is diagnostic of bipolar mood disorder.

Psychotic depression is characterised by the presence of mood-congruent delusions (e.g. guilt, poverty of speech, nihilism) or hallucinatory experience arising in the context of depressive symptomatology. About 50% of patients presenting with psychotic depression for the first time will eventually go on to develop bipolar mania.

Acute schizophrenia is often characterised by the onset of anxiety, perplexity, disordered thinking, delusions, auditory hallucinations and poor insight in the context of a gradual decline in the ability to function.

Schizophrenia is a psychosis that is not due to a mood disorder and that tends to be characterised by the occurrence of positive and negative symptoms with cognitive dysfunction. Schizoaffective

Table 2. Symptoms of psychosis

Positive symptoms
- Delusions and hallucinations
- Formal thought disorder

Negative symptoms
- Flat affect
- Poverty of thought
- Lack of motivation
- Social withdrawal

Cognitive symptoms
- Distractibility
- Impaired working memory
- Impaired executive function

Mood symptoms
- Depression
- Elevation (mania)
- Mixed affective state

Anxiety/panic disorder

Aggression/hostility/suicidal behaviour

disorder is characterised by symptoms of both schizophrenia and bipolar disorder, either simultaneously or in different episodes.[2]

Early recognition of psychosis

Increasing emphasis has been placed on early detection of prepsychotic or prodromal symptoms (Table 3). Some of these are nonspecific whereas others are attenuated symptoms of psychosis. Early recognition can facilitate rapid intervention and treatment. The development of full-blown psychosis and the associated serious complications may be prevented in some patients.

Clinical assessment

Although many patients with a relapse of a psychotic illness will present with characteristic symptoms and retain insight into the need for help, other patients will be suspicious, unco-operative and insightless about the presence of their illness. The GP, who has often known the patient and his or her family for many years, is often in the best position to establish a therapeutic alliance, which will be the basis of subsequent interventions.

Parents sometimes visit GPs with their adolescent child who has a manifested decline in psychosocial functioning. This can occur due to a number of reasons and specific questions are required to elicit psychotic symptoms (Table 4). It is essential to develop trust and to offer assistance for problems that are apparent to both the patient and doctor. Anxiety, insomnia, stress, and depression can cause distress, and patients will often appreciate that medication can assist with these symptoms. Debate about the presence of a mental illness or the diagnosis of schizophrenia is likely to be entirely counterproductive in the insightless patient. If parents are involved, it is vital to obtain information from them and to provide them with counselling and support. Many parents find the assistance offered by organisations such as the Mental Illness Fellowship or the Association of Relatives and Friends of the Emotionally and Mentally ill (ARAFEMI) invaluable.

If possible, a physical assessment of the patient should be carried out. However, the examination may need to be deferred until the psychosis is under better control. Neurological examination is important and a number of physical investigations may be indicated to exclude secondary causes of psychosis and to establish baseline function of organ systems for ongoing pharmacotherapy (Table 5).

Frequently, patients will present with psychotic symptoms after cannabis, stimulant or hallucinogen abuse. Patients with psychosis induced by drug intoxication should recover rapidly and spontaneously if the abuse can be stopped. Long-term drug use may cause lasting changes in the brain so that the patient presents with drug-induced psychosis in the absence of any current intoxication. Therefore, taking a history of past drug use is essential. Treatment of such states is usually similar to that of functional psychosis, although the prognosis may be better if the drug abuse does not relapse.

Table 3. Early or prodromal symptoms of psychosis

- Reduced concentration, attention
- Deterioration in role functioning
- Irritability
- Suspiciousness
- Reduced drive and motivation, anergia
- Anxiety
- Social withdrawal
- Sleep disturbance
- Depressed mood

Risk assessment

Possible risk of accidental mishap, self-harm, suicide or violence to others must be considered in an initial clinical assessment. Table 6 lists points to consider when carrying out a risk assessment.

Static risk factors include the demographic and historical causes. Increased risk of harm to others is often seen in young men with psychosis, particularly those who are unemployed and disenfranchised, and those with a history of antisocial behaviour or physical violence. Risk factors can also be based on current clinical symptoms. Those symptoms of psychosis that increase the likelihood of a patient acting on psychotic material include command auditory hallucinations, persecutory delusions and lack of insight.

Situational risk factors include access to more lethal means of harm to self or others (e.g. weapons), lack of support or monitoring and the presence of disinhibitory effects such as intoxication with substances.

The presence of previous suicide attempts and aggressive behaviour

Table 4. Questions designed to elicit some symptoms of psychosis

Auditory hallucinations
Do you hear voices of people talking to you even when there is no one around?

Thought insertion
Have you felt that thoughts are being put into your mind? Do you experience telepathy or extra sensory perception?

Thought withdrawal
Have you experienced thoughts of being taken out of your mind?

Thought broadcasting
Have you felt that other people know what you are thinking?

Thought echo
Can you hear your thoughts spoken aloud?

Delusion of control
Have you felt the control or influence of an outside force?

Delusions of reference
Do programs on the television or radio hold special meaning for you?

Delusions of persecution
Do you feel that you are being singled out or picked on? Is there a conspiracy against you?

Delusions of grandeur
Do you have special abilities or power?

Delusions of guilt
Do you believe that you have ever done something deserving punishment?

Depressed mood
Have you been feeling sad or down in the dumps recently, not enjoying activities as much as before?

Elevated mood
Have you been feeling particularly good in yourself, more cheerful, full of life?

Table 5. Investigations for patients presenting with acute psychosis

Baseline investigations to exclude organic brain causes of psychosis

- Full blood examination
- C-reactive protein measurement/erythrocyte sedimentation rate
- Thyroid function test
- Calcium level
- Vitamin B_{12}/folate levels
- Urinary drug screen (for illicit drugs, alcohol, benzodiazepines)
- HIV infection in appropriate populations
- Brain CT
- EEG if temporal lobe epilepsy suspected

Ongoing investigations to check for any side effects of treatment

- Random blood glucose – metabolic risk with some atypical antipsychotics
- Cholesterol and triglycerides – metabolic risk with some atypical antipsychotics
- Full blood examination – blood dyscrasias with variety of medications
- Urea and electrolytes – hyponatraemia in antidepressant use
- Liver function testing – transaminitis with antipsychotics and mood stabilisers
- Prolactin level – raised by most antipsychotics

during periods of psychosis is frequently predictive of future problems. Patients at high risk will usually require referral to specialist services, with the use of hospitalisation as a key risk-management strategy. Some patients may require hospitalisation on an involuntary legal basis using the relevant Mental Health Act.

Management of psychosis

Tranquillisation for control of acute symptoms

It can take weeks to months to decide on the definitive pharmacological treatment for psychosis; however, anxiety, agitation, hostility, mood elevation, irritability and insomnia are just some of the symptoms that require immediate intervention. For some patients with psychosis and insomnia, a simple hypnotic may suffice. Many patients will require tranquillisation with substantial doses of sedative and/or anxiolytic medications.

Benzodiazepines such as diazepam (Antenex, Ducene, Valium, Valpam) and oxazepam (Alepam, Murelax, Serepax) at substantial doses have been frequently utilised but caution is required with the possibility of paradoxical reactions, toxicity and addiction in the long term. The typical (first generation) antipsychotic chlorpromazine (Largactil) has been the traditional gold-standard tranquilliser, but is prone to cause postural hypotension and other serious side effects. The atypical (second generation) antipsychotics quetiapine (Seroquel), olanzapine (Zyprexa) and risperidone (Risperdal) are frequently used for rapid tranquillisation.

Although many factors determine dosing, a physically healthy young male with acute psychosis may need 10 to 20 mg oral diazepam repeated three to four times per day, or alternatively, quetiapine 100 mg up to four times (if tolerated) on day one, titrating up on subsequent days for tranquillisation. Quetiapine is useful at 25 mg doses in some patients, particularly for insomnia. Olanzapine 10 mg orally is a useful tranquillising dose in patients with mild to moderate psychosis and 15 to 20 mg for moderate to severe psychosis.

Pharmacological management

Antipsychotic medications are the cornerstone of treatment for psychosis. Atypical antipsychotics are usually recommended due to lower propensity for extrapyramidal side effects, although these drugs can have other side effects with serious implications (Table 7). The aim of treatment is the complete remission of symptoms.

Some of the antipsychotics require dose titration. Risperidone must be started at a low dose, for example, 1 mg twice daily, but can be titrated up to the therapeutic dose within three days. Quetiapine is usually commenced at 25 mg twice daily, but patients with acute psychosis can tolerate a rapid titration and will often benefit from a rapid initiation (e.g. 200 mg on day one, 400 mg on day two and 600 mg on day three, adjusted for tolerability).

For patients presenting with schizoaffective disorder or mania, mood stabilisers may be added to the antipsychotic medications. Valproate (Epilim, Valpro), carbamazepine (Tegretol, Teril) and lithium (Lithicarb, Quilonum SR) are utilised. Valproate is probably the most practical in the acute setting because of its absence of cardiovascular or renal toxicity (in contrast to lithium), ease of use, and short-term tolerability. Doses of valproate are normally between 1000 and 2500 mg per day. Blood concentrations, full blood examination and liver function need to be monitored in patients taking these medications. The guidelines for management of acute psychosis are given in the box on page 24.

Antidepressants are added to antipsychotic medications for patients with psychotic depression. However, electroconvulsive therapy is probably the most effective treatment in this situation.

A psychiatric opinion should be obtained and recently access has been improved through the availability of new Medicare items 296 and 291 (for more information visit www.health.gov.au/internet/main/publishing.nsf/Content/health-pcd-gp-mental-health-care-medicare). Patients who refuse to see a psychiatrist initially will often agree as their condition starts to improve.

Psychosocial management

Psychological and social interventions are usually provided by specialist services for patients who have had acute psychosis. However, the GP may need to continue interventions following the inpatient treatment phase, in collaboration with mental health services, nongovernment rehabilitation services or a private psychiatrist. In rural settings, the whole treatment episode may need to be managed by the GP alone.

Supportive psychotherapy and psychoeducation are essential early interventions for patients and their families. The GP should emphasise that psychosis is due to a chemical dysregulation, involving an overactivity of dopamine function in the brain. Old and discredited ideas of psychogenesis, such as the schizophrenogenic mother, may need to be confronted in order to eliminate guilt and blame.

Prognosis is negatively affected if the family is over involved and prone to conflict and criticism. Such families benefit from being taught problem-solving techniques in a family therapy setting.

Long-term management

Around 10 to 20% of patients presenting with psychosis will go on to develop chronic treatment-refractory symptoms, especially negative symptoms. Some patients will be appropriate for clozapine (Clopine, CloSyn, Clozaril) treatment, and an increasing number of GPs are becoming experts in the haematological and cardiac monitoring that is required for clozapine prescription, in conjunction with specialist centres.

GPs maintain an important role in monitoring and treating physical disorders in patients with chronic psychosis. These patients have higher rates of morbidity and mortality than the general population, with significantly higher rates of smoking, obesity and poor self-care. Dietary and smoking cessation interventions, and monitoring for cardiac and endocrinological disorders are often challenging but essential for these patients.

Table 6. Aspects of risk assessment

Types of risk

- Suicide
- Physical harm to others
- Accidental mishap – e.g. wandering, dehydration
- Vulnerability to others – e.g. sexual exploitation
- Disinhibition – e.g. financial indiscretion in mania
- Self-care, especially of medical disorder

Static risk factors

- Age
- Gender
- Unemployment
- Homelessness or unstable living circumstances
- Previous forensic history
- Previous history of acts of suicide attempt, destruction of property, assault

Clinical presentation

- Command auditory hallucination
- Thought broadcasting
- Persecutory delusions
- Lack of insight
- Hopelessness
- Suspiciousness, hostility, irritability, agitation

Situational risk factors

- Access to weapons
- Lack of support or monitoring
- Disinhibitory effects – e.g. acute intoxication

Patient information

Information about the treatment of psychosis, the characteristics of medication

continued

Table 7. Common atypical antipsychotic medications, usual dose ranges, side effects, administration, and PBS listings

Generic name	Registered name	Dose range (mg per day)	Side effects	Administration	PBS listing*
Risperidone Long-acting injectable risperidone	Risperdal Risperdal Consta	2 to 8	Extrapyramidal symptoms at supraoptimal doses, postural hypotension, mild weight gain, hyperprolactinaemia	Needs to be titrated to a therapeutic dose over three days or more. Long-acting injectable form, given every two weeks	Listed on PBS (authority required, streamlined) for schizophrenia
Olanzapine	Zyprexa	5 to 20	Extrapyramidal symptoms at supraoptimal doses, postural hypotension, sedation, mild elevation in liver function, weight gain. Monitor for diabetes, hyperlipidaemia and metabolic syndrome	Administed as a single daily dose without regards to meals	Listed on PBS (authority required, streamlined) for schizophrenia and maintenance treatment of bipolar I disorder
Quetiapine	Seroquel	200 to 800	Sedation, postural hypotension, tachycardia, mild weight gain	Titration to therapeutic dose may be necessary Administered twice daily, with or without food	Listed on PBS (authority required, streamlined) for schizophrenia and as monotherapy (for up to six months) for an episode of acute mania associated with bipolar I disorder
Amisulpride	Solian	200 to 800	Extrapyramidal symptoms at supraoptimal doses, hyperprolactinaemia	No titration needed, best given twice daily	Listed on PBS (authority required, streamlined) for schizophrenia
Aripiprazole	Abilify	10 to 30	Nausea, headache, insomnia, agitation (initially)	Long half life, given once a day without regards to meals	Listed on PBS (authority required, streamlined) for schizophrenia
Ziprasidone	Zeldox	80 to 160	Extrapyramidal symptoms can occur at supraoptimal doses, anxiety, agitation, dizziness, sedation, nausea, dry mouth, postural hypotension; contraindicated in patients with recent myocardial infarction in heart disease	Taken twice daily with food	Listed on PBS (authority required, streamlined) for schizophrenia
Paliperidone	Invega	3 to 12	Extrapyramidal symptoms at supraoptimal doses, postural hypotension, mild weight gain, hyperprolactinaemia	Derived from risperidone, but different pharmacokinetics allow daily dosing	Listed on PBS from 1 April 2008 (authority required) for schizophrenia (including acute treatment and recurrence prevention)

* As of 1 April 2008. Please consult the full Schedule for more information.

Managing a patient with acute psychosis

- Assess danger of the patient to self and/or others and if there is a need for hospitalisation
- Assess physical state of the patient and consider possibility of substance abuse
- Consider specialist treatment options – e.g. psychiatrist, involvement of mobile community outreach psychiatric services
- Patients can be managed with the following initial doses of antipsychotic medications (average doses are given and second-generation antipsychotics are recommended):
  - risperidone 1 mg twice daily, increasing over a few days to 2 mg twice daily
  - olanzapine 10 mg every night
  - quetiapine 25 mg twice daily (day 1), 50 mg twice daily (day 2), 100 mg twice daily (day 3), 100 mg in the morning and 200 mg at night (day 4), 200 mg twice daily (day 5)
  - amisulpride 300 to 400 mg twice daily
  - aripiprazole 15 mg daily
  - ziprasidone 60 mg twice daily
  - paliperidone 6 mg daily
- If response is inadequate in three weeks the dose can be increased (unless significant extrapyramidal symptoms or other serious side effects occur) to:
  - risperidone 3 mg twice daily or 6 mg every night
  - olanzapine 20 mg every night
  - quetiapine 400 to 750 mg per day
  - amisulpride 400 to 600 mg twice daily
  - aripiprazole 20 to 30 mg daily
  - ziprasidone 80 mg twice daily
  - paliperidone 12 mg daily
- Treat anxiety, agitation and insomnia with short-term diazepam or tranquillising antipsychotics, such as quetiapine and olanzapine, repeated as required
- Consider use of long-acting injectable risperidone if adherence is unlikely despite psychosocial interventions, or patient fails to achieve optimal response from oral therapy
- Mood stabilisers may need to be added to antipsychotic medications in patients suffering from mania or schizoaffective disorder
- If depression persists adjunctive antidepressants may be necessary
- Engage patient in supportive psychotherapy and case management – family therapy and cognitive behaviour therapy may be indicated
- Consider social interventions – housing options, resources, social supports
- Evaluate functional status and consider vocational rehabilitation options

and the focus on relapse prevention in the future, will need to be addressed with the patient and the family. Pamphlets about psychosis can be obtained from SANE Australia (www.sane.org) and open access information for consumers and carers is available on the website of the Royal Australian and New Zealand College of Psychiatrists (www.ranzcp.org).

Conclusion

Patients presenting with acute psychosis pose a difficult therapeutic challenge for GPs. This is a clinical situation that carries the potential risk of a fatal outcome, through suicide, homicide or iatrogenic causes. Violence may also occur, even if carried out by only a few patients, and the doctor has a responsibility for the welfare of families and the community as well as for the patient. GPs plays a pivotal role in engaging, assessing and treating patients with acute and chronic psychosis, as well as co-ordinating specialist services. MT

Further reading

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