Hsu-en Lee
Jon Jureidini

Emerging psychosis in adolescents

A practical guide

Background
Emerging psychosis is a challenging presentation for the general practitioner as there is disagreement in the literature about classification and appropriate treatment protocols.

Objective
This paper highlights three main issues in primary care: recognising early signs of emerging psychosis, and how and when to refer patients; complexities associated with comorbid substance use; and management when the patient is referred back to primary care in the post-acute phase.

Discussion
Emerging psychosis is a complex presentation that warrants a considered approach right from the initial assessment. This paper emphasises the rationale for 'watchful waiting' in the interest of diagnostic certainty before potentially harmful treatments are commenced. There are also guidelines for a balanced approach to management, where engagement with the patient, monitoring medication effects and preventing relapse are the main aims.

Keywords
mental health; adolescent psychiatry; community psychiatry; schizophrenia and disorders with psychotic features

Case study

John is a 17-year-old high school student. He previously was bullied at school and saw a psychologist. He had unresolved guilt about retaliating against the bullies.

His parents took him to his general practitioner, Dr Smith, with concerns that John is 'just not himself'. Recently, he disclosed a struggle with internet pornography to his parents, and his belief that he would go to hell for it. He mentioned ideas of being possessed by demons, and that he and his environment were being manipulated by 'forces'. Over weeks, he withdrew socially, stopped attending school and began to isolate himself from family.

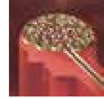
Prior to this deterioration, John was drinking heavily. His parents were unaware of illicit drug use. The family history includes a maternal aunt with schizophrenia and a cousin with bipolar disorder. On mental state examination, John appears dishevelled and pre-occupied.

After discussing suspicions of 'a mental health issue' with John and his parents, Dr Smith calls the psychiatry registrar at a children's hospital. He is advised that John should present to the emergency department for triage and review. John is reluctant, but agrees with some persuasion.

On arrival to hospital, John is anxious and behaviourally agitated. There is consideration of an involuntary treatment order and parenteral medication, which is averted by the gentle support of his parents and medical staff. John is transferred to the child and adolescent psychiatric ward.

Two weeks later, Dr Smith receives a discharge summary. John has been given a provisional diagnosis of 'first-episode psychosis', and has been commenced on risperidone. The plan for ongoing management is somewhat vague.

Two months later, John returns to see Dr Smith. He has been compliant with antipsychotics and has been receiving psychotherapy from a youth mental health service with a focus on helping address the issue of underlying guilt. His psychosis appears to have resolved on risperidone 3 mg daily, but his affect remains blunted, he is avoiding school and has gained 6 kg over 3 months.



Introduction

Psychosis is relatively uncommon in adolescents, particularly under the age of 15 years, but it is much discussed in the literature. Statistics vary considerably, but generally the accepted prevalence in the population is one per 1 000.[1,2] Symptoms such as hallucinations and delusions are suggestive, but not diagnostic of psychosis.[3] There is debate whether the appearance of such symptoms are better thought of as a prodrome of a more sinister psychiatric illness, such as schizophrenia, or a separate entity that does not always lead to chronicity.[3,4]

The numerous labels used in the literature, such as emerging psychosis, prodromal psychosis, attenuated psychosis, early psychosis, and first-episode psychosis, create difficulty in following the research literature. It is important to note that these labels are used too readily at times. As a general rule, it is better not to apply these labels unless there is clear evidence of psychotic illness. This article will use a general definition of psychosis as 'a severe mental disorder, with or without organic damage, characterised by derangement of personality and loss of contact with reality and causing deterioration of normal social functioning.'[5] Further terminology is listed in *Table 1*.

In considering emerging psychosis, prior to acute declaration of illness with frank positive symptoms, it is thought that there are observable changes in the young person's cognitive, emotional and psychological state, and their general functioning. General practitioners (GPs) often need to rely heavily on collateral information. In this early phase, it is critical to exclude any other triggers or stressors that could explain the sudden change in the mental state. Frequently, young people presenting with possible psychosis have been using illicit drugs, and sensitive attention to the drug history is essential. It is always more worrying when there has been a substantial functional deterioration.[6] To a lesser extent, a family history of psychiatric illness can be helpful in considering potential aetiologies.

Table 1. Terminology

Paranoia	A pathological mental state characterised by the presence of systematised delusions, often of a persecutory character, and associated with a misinterpretation of thoughts, words, actions and/or feelings of others
Prodrome	A premonitory symptomatic period preceding the onset of definitive psychotic illness. This can only be identified retrospectively
Delusions	A false belief firmly maintained despite incontrovertible evidence to the contrary, and in spite of the fact that other members of the culture and society do not share the belief
Hallucinations	A sense perception without an external stimulus
Thought disorder	A pathological state of intellect or cognition associated with dysfunction and/or disruption in the content, stream and/or form of thought. It can also refer to abnormal beliefs about the possession of thoughts

Table 2. Key points in a general practice assessment for suspected psychotic illness

- Take the time to examine the history and formulate an understanding of the patient's presentation
- Obtain collateral information
- Perform screening investigations, including a urine drug screen
- If in doubt, contact psychiatric services for advice

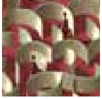
Initial presentation

Typically, a young person is brought to the GP by a concerned relative who might report a decline in social functioning. There may be an awareness of underlying 'odd' thinking, perhaps paranoid or delusional in content. It is often difficult to establish the presence of formal thought disorder until some rapport is built. The patient may use language such as 'worries' or 'stress' until they feel more confident to speak openly about their experience. Key points in assessing for psychotic illness are listed in *Table 2*.

It is important to bear in mind the developmental context, including the patient's level of linguistic sophistication, and the role that imagination and fantasy play during childhood. Transient and even recurrent hallucinatory phenomena are not uncommon in adolescents, and can be related to anxiety, grief or trauma, and not necessarily psychosis.[7,8] Therefore hallucinations should not be thought of as highly suggestive of psychosis, unless accompanied by evidence of disordered thinking and/or deteriorating functioning.[7] Psychosis is a syndrome and rarely would present with discrete and isolated symptoms.[9] Furthermore, there are no pathognomonic symptoms in the early phase that reliably predict that the patient will develop a sustained psychotic illness.[10–12]

Be mindful that for most patients, experiencing emerging psychotic symptoms or an acute psychotic episode is traumatic. There will be anxieties and fears, as well as anticipatory grief about potential losses, both real and imagined. GPs are in a privileged position of trust and can play a crucial role in guiding and supporting the patient through the initial assessment and treatment process.

GPs have to consider how best to provide treatment, and strive to do so without causing further trauma. Where the risk is acute and cannot be attenuated by the GP, coercion such as involuntary orders or involvement of the police may be required. Whilst the legal framework may vary between jurisdictions, the ethical principles around patient autonomy, and the balance between beneficence and non-maleficence are applicable. Briefing health care personnel about a patient's mental state often facilitates a more appropriate and efficient intervention under these circumstances. Non-pharmacological de-escalation strategies often work best, and a show of numbers in uniform is often sufficient. There will be instances when a tranquilising medication such as benzodiazepines or atypical antipsychotics may need to be utilised in the interest of safety.



Investigations to consider include baseline blood tests, brain imaging and electro-encephalogram, usually performed by specialist teams after stabilisation of the patient's mental state.

Differential diagnosis

Differentiating between a primary psychotic illness and a drug-induced psychosis is not always straightforward. Often, information about a patient's drug history is not forthcoming. There can also be uncertainty in the quality, quantity and timing of substances taken. Common substances related to psychotic symptoms are cannabis, amphetamines or methamphetamines, and alcohol. Cocaine and hallucinogenics can also be implicated, as can many prescribed opioids and analgesics such as ketamine. For a diagnosis of drug-induced psychosis, there should be some certainty that the onset of illness coincides with drug use, and that the symptoms do not pre-date the exposure to the drug. Often it can be difficult to determine the exact timing of illness onset. This is complicated by the common use of illicit substances to self-medicate for pre-existing symptoms.

Cannabis is a particularly common precipitant or contributor to psychosis, and is commonly used to self-medicate mental illness. Therefore a urine drug screen is mandatory. Cannabis can produce a low-grade or quasi-psychotic positive symptomatology, most commonly paranoia, and it is important to distinguish this from more severe illness that warrants intensive psychiatric intervention.

It is often assumed that if the psychotic syndrome is drug-induced, then it will be a time-limited entity, and gradual recovery will occur as the drug leaves the system. However, there is a sub-group of patients with a genetic vulnerability to drug-induced psychosis and a higher risk of chronic illness.[13] These adolescents often report a much more prominent experience of acute psychosis as a reaction to the substance use.[14,15]

Management of emerging psychosis

The complexity inherent in accurately diagnosing emerging psychosis warrants a cautious and measured approach. It must be borne in mind that inappropriate treatment of a non-existent psychotic illness can contribute to delayed treatment of a missed disorder or cause harm from potentially dangerous psychotropic medications.[16] Complex presentations often can be better understood over time as more information becomes available, therefore it can be useful to resist the temptation to rush into diagnostic labelling and treatment. While it is clearly in the patient's best interest to receive treatment as early as possible, this should not justify rushed decision-making. Realistically, an 'acute' psychosis still requires a medium- to long-term plan for ongoing treatment and monitoring; taking a bit of extra time at the beginning to clearly establish a diagnostic formulation will pay dividends. Once there is clarity around the diagnosis, then treatment should be offered without delay, in recognition that prolongation of the period of untreated psychosis may be a poor prognostic factor.[17]

In practice, GPs rarely make a diagnosis in isolation from specialist services. The role of the GP is in early recognition of significant disturbance, to decide on the need to refer to Child and Adolescent Mental Health Services (CAMHS), headspace clinics or early psychosis services, and subsequently to be involved in follow-up of the patient's management.

Treatment advice is available via on-call psychiatry services at tertiary hospitals. If more detailed consultation is required, referrals can be made to psychiatrists with expertise in child and adolescent psychiatry, using Medicare Benefits Schedule (MBS) item 291 for a one-off psychiatric assessment to establish a management plan.

Discussing the diagnosis (including differentials) and management with family and carers is essential. GPs should ensure the family are given a clear formulation and explanation. In most cases of emerging psychosis, there is a contribution from substance use or stress-diathesis. The management of both is an ongoing challenge. Some diagnostic labels have worrying implications. Where the diagnosis remains uncertain, terms such as schizophrenia and schizoaffective disorder should be avoided.

Compliance is an issue in the treatment of psychosis and is especially challenging in adolescents. The best way to keep the young person engaged with their treatment team is through education and the encouragement of insight in the patient and their social supports. Establishing a good rapport is critical; it is important that your patient can discuss difficulties with compliance openly with you and to be able to speak frankly about their thoughts about treatment. Even with the best of care, it may be that an adolescent will want to experiment with non-compliance. Clinicians must be prepared to make the shift from optimal care to harm minimisation, until the young person hopefully comes to a more mature approach to their illness. Forced compliance may prevent that important developmental process, with negative effects on long-term outcome if the condition turns out to be chronic.

Prognostically, most cases of emerging psychosis do not lead on to schizophrenia or schizoaffective disorder.[4] Factors that work against this rule are frequent relapse and ongoing substance abuse. There are guidelines to suggest maintaining antipsychotic medication treatment for at least 12 months after a first episode of acute psychosis.[18,19] but there needs to be mindfulness about basic pharmacotherapy principles; weigh up the risk against the benefit of the medication and always use the lowest dose possible. In most cases, pharmacotherapy should play a secondary or adjunctive role to sociological and psychological interventions.[19] That said, given the significant health consequences of a full-blown psychosis, efforts should be made to support the young patient in every endeavour to avoid relapse. A case management approach through a local CAMHS or Early Psychosis intervention team can be very valuable in this regard. Key points in the GP management of post-acute psychosis are listed in *Table 3*.

General practitioners will not often initiate antipsychotics in this setting, but there is a very important role for the GP in monitoring antipsychotic use, particularly their effects on physical health. Atypical antipsychotics carry a significant risk of metabolic derangements. There needs to be some consideration of risk factors such as family history of heart disease or diabetes, diet and ethnicity. Intensive and systematic monitoring is essential and may be best carried out by a GP, as outlined in *Table 4*.

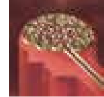


Table 3. The GP's role in the management of post-acute psychosis

- Regular reviews of the patient's mental state and compliance with treatment
- Assess range of risks to self and others, including school drop-out, self-harm and impact on family
- Ongoing education for the patient and family/carers about the psychosis
- Reinforcement of the need to avoid possible triggers/contributing factors such as illicit drugs
- Discuss early warning or relapse signs with the patient and family
- Close liaison with, and advocacy in, the patient's local mental health network
- Support with any trauma experienced in the acute phase, and grief associated with perceived losses from illness
- 'Watchful waiting' might be required, with the GP providing a safe base as adolescents make mistakes in the course of coming to a more mature level of self-care

Table 4. Monitoring of adolescents on antipsychotics

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Measure baseline: • weight and body mass index • blood pressure
Every month for the first 3 months, and every 3 months subsequently, measure and record: • weight and abdominal circumference • total cholesterol and triglyceride levels • blood glucose • white cell and neutrophil counts • liver function • urea and electrolytes • prolactin levels
At baseline, 3 months and yearly after: • check for extrapyramidal side-effects – dystonia – Parkinsonism – akathisia – dyskinesia

Key points

- Psychosis in children and adolescents is uncommon.
- Balance taking the time to establish a clear understanding and formulation of the case against delaying treatment for psychosis.
- If there is clear evidence of psychosis, a referral to a psychiatrist is mandated.
- The main roles for a GP are psychological and family support, and monitoring of physical wellbeing in the post-acute phase.

Authors

Hsu-en Lee MBBS, FRANZCP, Cert Child Adol Psych, is a consultant psychiatrist, Women's and Children's Hospital, Boylan Inpatient Services, Adelaide, SA. hsu-en.lee@health.sa.gov.au

Jon Jureidini MBBS, FRANZCP Ph.D is a child psychiatrist, Women's and Children's Hospital, Department of Psychological Medicine, Adelaide, SA

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correspondence **afp@racgp.org.au**