When individuals with recent-onset psychotic symptoms present for treatment, the clinical picture often includes substance misuse. Widespread among those with psychotic disorders, lifetime substance use disorder among individuals presenting with a first episode of psychosis has been observed in about a third to a half of those admitted for treatment, a rate that is significantly higher than that found in the general population. It has been well documented that comorbid substance misuse compromises recovery in psychosis and is associated with a host of negative outcomes, including increased risk of relapse of positive symptoms, in-patient readmission, non-adherence to treatment, and poorer functional outcome. If this dim outlook is not enough to warrant close scrutiny of this patient group, recent studies have identified issues that underscore the importance of evaluating patterns of substance use and misuse and monitoring the relationship of substance use to psychiatric symptomatology.

**The association of substance misuse and psychosis**

The most common substances of misuse such as alcohol, cocaine, amphetamine, hallucinogens and cannabis have psychotomimetic properties that can produce psychotic reactions in individuals who are otherwise free of severe mental illness. Use of these drugs by individuals with primary psychotic disorders, such as schizophrenia and bipolar disorder, often results in presenting symptoms that are similar to those seen in individuals showing psychotic reactions due to drugs alone. Cannabis ranks high among the world’s popular recreational drugs and is the most extensively used illicit substance by people with psychotic disorders. Tetrahydrocannabinol (THC) is an active psychopharmacological ingredient in cannabis which, when used to intoxication, can lead to acute and transient psychotic symptoms in some people and recurrences of psychotic symptoms among certain individuals with known psychotic disorders. Cannabis is also the most comprehensively researched drug in relation to psychosis. Systematic reviews of cannabis and psychosis repeatedly confirm an association between exposure to cannabis and psychosis. Although it has been suggested that cannabis may play a role in the aetiology of psychosis, the contention that cannabis use can cause a long-term psychosis remains controversial.

The rapidly developing work in this field has, however, yielded findings that can guide clinicians in their treatment of individuals with early symptoms of psychosis. Early cannabis use and a longer duration of use have been found to be associated with psychosis-related outcomes in young adults, whereas lifetime cannabis use has been found to be associated with an earlier onset of psychosis. Importantly, it has been revealed that patients with first-episode psychosis were more likely to use high-potency cannabis (sensemilla, ‘skunk’) for longer periods and with greater frequency compared with a non-patient control group. High-potency cannabis is growing in popularity in some parts of Europe, and its use among people admitted for psychiatric treatment should be assessed. It is important to keep in mind, however, that availability and trends in use of alcohol and illicit substances vary considerably by region.

More information on the relationship of other substances of misuse, including polydrug use, to the onset and course of psychotic disorders is needed.

**Documenting patterns of substance use and misuse**

Underdetection of comorbid substance use at admission for psychiatric care has been reported. Ley et al compared the...
results of urinalysis with information on drug use taken from patient records, and found that of cases positively identified through urinalysis, 54% were not identified in case notes. This study underscores the need for a thorough drug use history that elicits information on age at first drug use (specific to drug of use, including alcohol), type and amount of drugs used, including high-potency cannabis and use of drugs in combination, route of administration (oral, smoked, injected), and whether drug use was either prompted or followed by any psychiatric symptom, including psychosis. Urine toxicology screens at treatment admission, obtained with consent, and efforts to obtain collateral reports on drug use from family members and significant others can complement patient self-reports. Patterns of lifetime use should be distinguished from use in the immediate period preceding admission, to determine whether drug use might be related to the onset of psychosis. Finally, an assessment of whether the person meets diagnostic criteria for misuse or dependence should be determined, as this signals a need for substance misuse treatment.

Determining the diagnostic distinction between primary and substance-induced psychotic disorders

Primary psychotic disorders and substance-induced psychotic disorders are distinct diagnostic entities with fundamentally different treatment needs. A diagnostic assessment that thoroughly differentiates these disorders is particularly important in the early stages of psychotic disorder, when an appropriate match of diagnosis and treatment has critical implications for outcome. However, in the initial stages of a first psychotic episode diagnostic certainty can be elusive. Under all circumstances, minimising the risk of harm to self or others and prompt treatment of psychotic symptoms are warranted. Although there remains a lack of information on the course and outcome for the management of substance-induced psychosis, current diagnostic criteria specify that remission of psychotic symptoms following acute intoxication and withdrawal suggests that the psychosis is substance induced. If psychotic symptoms persist during a period of drug abstinence in excess of 4 weeks, it is likely that the psychosis is not related to withdrawal and is therefore primary.

A common denominator in both conditions is the presence of psychotic symptoms, which often fluctuate in the early stages of illness. Given the mounting evidence that a longer duration of untreated psychosis is associated with a worse clinical outcome, treatment of psychotic symptoms should not be delayed, regardless of psychosis diagnosis or the extent of substance misuse. In all circumstances, frequent follow-up visits, including outreach, are warranted to confirm diagnostic accuracy and treatment efficacy.

Thorough follow-up of individuals with an initial diagnosis of substance-induced psychosis is particularly important, since findings suggest that those with poorer premorbid functioning, less insight into psychosis, and greater prevalence of family mental illness are at risk of being re-diagnosed with primary psychotic disorder in a future episode. Treatment guidelines for the management of early-phase substance-induced psychosis, including the optimal duration of antipsychotic treatment, are not well established compared with those for primary psychotic disorder. Even so, minimal treatment recommendations would address the substance use problem and the need to monitor persistent or recurrent psychotic symptoms. Just as there are risks to the inadequate detection and treatment of psychotic symptoms in the early phase of primary psychotic disorders, there are also risks to the under-detection of substance-induced psychotic disorders. Schanzer et al compared emergency department diagnoses with research diagnoses made by psychiatrists and found that patients given an emergency department diagnosis of primary psychosis but found by the research diagnosis to have substance-induced psychosis were significantly more likely to be treated for a primary psychotic disorder rather than for substance-induced psychosis. An incorrect diagnosis of primary psychotic disorder when the symptoms are substance induced is of particular concern because of the long-term consequences, which can include unnecessary hospital admissions, inappropriate treatment with antipsychotic medication with their potential for serious side-effects, and failure to receive appropriate treatment for substance misuse.

Implications for care

Recognition of the extent of comorbid substance misuse among individuals with psychotic disorders has stimulated research that expands our understanding of the effect of substance misuse on psychosis, its course and outcome. Evidence to date suggests the wisdom of informing young adults seeking psychiatric treatment and members of their families about the risks that substance misuse, including cannabis use, may pose to their future mental health and well-being. Further, interventions such as motivational interviewing, cognitive–behavioural therapy and assertive outreach may prove useful in engaging poorly motivated individuals misusing substances who are in need of substance-misuse treatment. A thorough assessment of patterns of substance misuse and close monitoring of the course and treatment of early-phase psychosis that is accompanied by substance misuse is indicated and could inform the development of more effective dual-diagnosis treatments for this complex comorbidity.

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