Substance use disorders

Alastair G Reid

Abstract

Drug misuse is widespread in the UK and causes significant morbidity and mortality. It is clearly important to know how to assess and manage substance use disorders, particularly to know about treatments for heroin addiction. In this article, we examine the principles of identifying and managing drug addiction, and consider in some detail the presentation, risks and harms, and treatment for misuse of, opioids, stimulants, benzodiazepines, cannabis and novel psychoactive substances, which constitute the main classes of substance misused in the UK.

Keywords Amphetamine addiction; cocaine addiction; drug addiction; heroin addiction; novel psychoactive substances; opiate addiction; opioid-related disorders; substance-related disorder; substance use disorder

Key points

- Refer to specialist addiction services early, especially to prescribe opioid substitutes
- Opioid detoxification entails removing a patient's tolerance to opioids; they are therefore at a raised risk of overdose should they relapse into opioid use. Unplanned detoxification must be avoided
- Methadone — when titrating, start low, go slow and monitor closely; do not stop suddenly; do not do unplanned detoxification; remember that breakthrough pain may require *more* opioid analgesia than in a person not on methadone
- Buprenorphine — watch out for precipitated withdrawal; remember that it may reduce the effectiveness of other opioids and that this can complicate pain management
- Novel psychoactive substances are usually synthetic cannabinoids or amphetamine-like stimulants and can have a range of serious adverse effects

Principles of managing drug addiction

The term 'drug', in the context of addiction, refers to the culturally unsanctioned use of a psychoactive substance. There are different levels of drug use, comprising occasional use, hazardous use, harmful use and dependence, and drugs can be taken in binges or used daily. Addiction can be thought of primarily as a disorder of motivation,[1] and much of the specialist treatment focuses on psychosocial processes. This article focuses on the identification and medical management of patients with harmful or dependent drug misuse.

In 2014/15 in England and Wales, 8.6% of adults (aged 16–59 years) had used an illicit drug in the past year, and 2.2% were frequent users. A total of 3.2% used a class A drug, and cannabis was the drug most likely to be used. In the same period, there were 7104 hospital admissions with a primary diagnosis of drug-related disorder. In addition, there were 2248 drug-related deaths. For adults in treatment for drug addiction, 52% were using only opioids.

Diagnosis and investigation

Diagnosis: the diagnosis is based primarily on an assessment interview. It is important to obtain a clear history of drug use from the patient (Table 1) and to note any signs of intoxication or withdrawal. A collateral history from friends or relatives is also useful.

Hypoglycaemia, head injury and intracerebral events should be considered in the differential diagnosis when a patient appears intoxicated.

Alastair G Reid *MB ChB PhD MRCPsych is a Consultant Psychiatrist in Oxfordshire and Honorary Senior Clinical Lecturer in Addiction Psychiatry, University of Oxford, UK. Competing interests: none declared.*

Investigation: a urine drug screen should be requested where drug misuse is suspected. Saliva drug tests are less useful as the detection period is much shorter, particularly for tetrahydrocannabinol (in cannabis). Hair strand tests are very accurate and have a long window of detection, but are very expensive. Screening for blood-borne viruses (hepatitis B, hepatitis C, HIV) should be routine for all drug-users as a public health measure.

Treatment of addiction

This follows a hierarchical process (Figure 1). The process of moving from drug use to abstinence is called recovery. It is important that, before approaching abstinence, patients are fully prepared for life without drugs.

The essential components of addiction treatment are: harm minimization, motivational interviewing, solution-focused therapy and relapse prevention, which is a form of cognitive behavioural therapy (CBT). Pharmacological treatments should complement the recovery approach,[2] and patients ultimately need to change their psychosocial environment. The key elements of being in recovery are (1) having social networks with other people who are in recovery, and (2) being occupied.

Detoxification is required only where physiological tolerance to a drug has occurred. It enables patients to stop using the drug without experiencing withdrawal symptoms. It is not a complete treatment for an addiction problem.

Rehabilitation, either residential or involving daily attendance, can be useful in the later stages of the recovery process. Patients should be abstinent from drugs and show clear motivation to change their lifestyle before entering a rehabilitation programme. Rehabilitation programmes use individual and group approaches, varying from 12-step (i.e. AA principles) through CBT to psychodynamic therapy.

Assessment of substance use

- Which substance(s)?
- How much (quantity and/or cost)?
- How often?
- For how long?
- By what route (smoke, intravenous, oral)?
- Where, when and with whom?
- Age when first started?
- Consequences: physical, psychological, social?
- Previous treatments: medication, detoxification, residential rehabilitation?
- Risks: from drug-use, risky sexual behaviour, pregnancy, children?

Table 1

Drugs of addiction

Opioids

Opioids are highly addictive and can easily be fatal in overdose. People can become dependent on illicit, prescribed or over-the-counter forms of opioid drugs.

Over-the-counter preparations usually contain codeine, a relatively mild opioid, and a non-steroidal anti-inflammatory drug (NSAID) or paracetamol. The dose per tablet is low, but very high daily dosages are often consumed. One particular risk is from the excessive quantity of NSAID or paracetamol consumed, which can lead to significant renal damage.

Presentation: the subjective effects of heroin are described as euphoric, warm and comforting with a sense that everything is 'OK' in the world. Heroin is taken by intravenous injection or inhaling the vapour ('chasing the dragon'), as well as by snorting, smoking with tobacco or injecting subcutaneously ('skin-popping'). The initial rush or euphoria can be followed by a period of 'gauching out' where the drug user becomes stuporose and classically sits with their head nodding, and often dribbles. This is a sign of intoxication and can be the prelude to overdose. Other signs of intoxication include constricted pupils. Intravenous use leaves visible track marks and bruises on the skin.

Risks/harms: these include overdose leading to respiratory arrest, local infection, systemic infection (hepatitis B, hepatitis C, HIV), septicaemia, haemorrhage and deep vein thrombosis.

Treatment: opioid withdrawal symptoms are not life-threatening but are very unpleasant. They are summarized in Table 2. Substitute prescribing of opioids is the treatment of choice for all forms of significant opioid dependence. Detoxification should also be considered, but care must be taken to assess readiness for abstinence. Patient preference and risk must be taken into consideration, but where both medications are suitable, methadone is preferred to buprenorphine.

Therapeutics of methadone and buprenorphine (Table 3)

Methadone is a potent agonist at the mu-opioid receptor (MOR). It has a long half-life of 24–36 hours with a peak plasma effect after 2–4 hours when taken orally, and steady state occurs within 5 days. Oral methadone is taken as a daily dose and removes the need for injecting and multiple dosing. An effective dose removes drug hunger and provides increased tolerance and protection against heroin overdose.

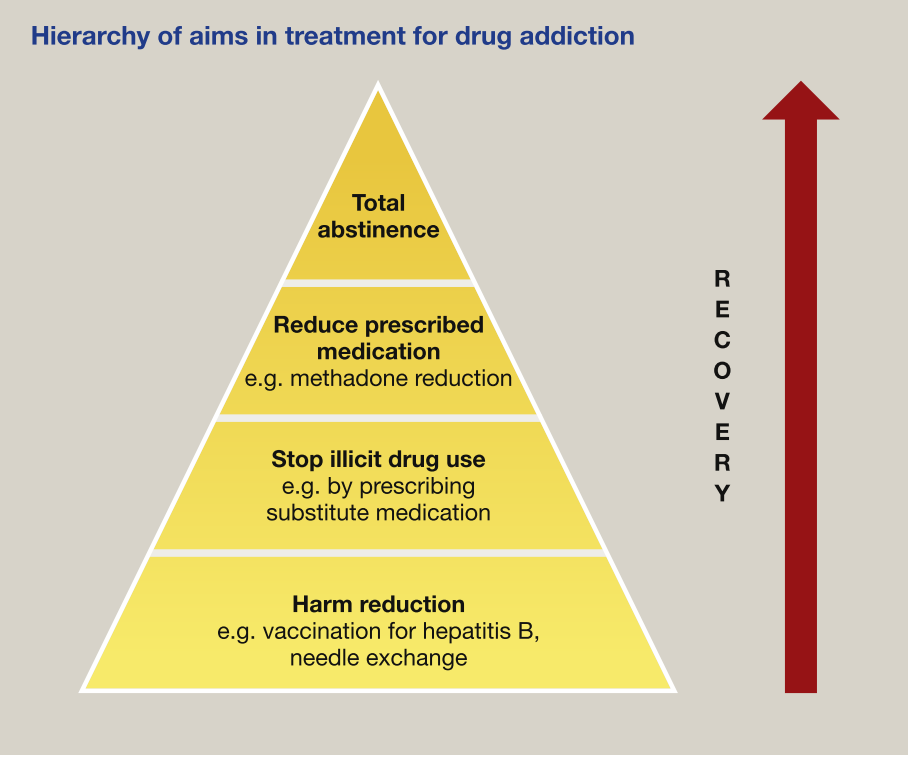

Figure 1