Opioid abuse is increasing at an alarming rate in many parts of South Africa and medical practitioners are frequently requested to treat patients with this disorder despite little training on this topic during undergraduate years.

Opioids include both natural derivatives of opium called opiates (e.g. morphine, heroin or codeine), as well as synthetic substances (e.g. pethidine). Routine drug screens test positive only for opiates, and special testing is required for synthetic opioids.

Opioid dependence is a chronic relapsing disease that develops from repeated self-administration of opioids, including heroin, over-the-counter and prescription opioids. Genetic and environmental factors contribute to its development. Repeated exposure to opioids can cause lasting structural and functional brain changes that are associated with distinctive behavioural patterns including compulsive substance seeking and repeated use despite horrendous consequences.

Opioid dependence should be distinguished from abuse. Abuse implies that someone persistently or sporadically uses substances in a manner that is unacceptable. Dependence draws on the physical and psycho-behavioural aspects of addiction.

Abuse is generally managed by using a psycho-educational approach, e.g. brief interventions or motivational interviewing. The treatment of dependence is usually more complex and requires a multi-professional approach with both medical and psychosocial interventions. Opioid dependence is associated with high morbidity and mortality. Heroin dependence has a substantial mortality rate (often due to accidental overdosing) and frequently requires long-term treatment.

The medical management of opioid dependence includes identifying and motivating patients to change, managing their co-morbid medical and mental health problems and then either achieving total abstinence rapidly using standard rapid detoxification procedures (withdrawal over 7 - 21 days), followed by relapse prevention strategies or else transferring the addict from abused opioids onto an individualised dose of substitution opioid (thus markedly reducing or preventing illicit drug use, allowing patients to stabilise their lifestyle), and slowly detoxifying them when they are ready.

The problems of opioid-dependent individuals evoke shame, denial and defensiveness in addicts, and negative responses in health workers. It is important to identify problems early in order to limit harm. Medical practitioners need skills in dealing with resistance and motivating opioid abusers to engage in treatment services (e.g. brief interventions and motivational interviewing) and should be familiar with treatment resources in their area.

Article 21/22 of the Prevention and Treatment of Substance Dependency Act (1992) and the draft copies of the revised version of this Bill, provide for the compulsory treatment (‘committal’) of clients who refuse treatment for substance dependence and who cause harm to themselves or their families.

Heroin dependence is associated with a high incidence of co-morbid medical and mental health complications, which require separate identification and treatment. Fatal accidental heroin overdose is a tragic cause of death. Medical complications may arise from non-sterile injecting practices or needle sharing, and include infections, HIV or hepatitis B or C transmission and complications caused by adulterants, e.g. talcum pneumonitis and renal complications. Common psychiatric problems include depression, protracted anhedonia (even with long-term abstinence) and personality disorders. Psychosis is rare but may arise from poly-substance abuse.

Rapid detoxification from all opioids and relapse prevention is currently the most frequently used treatment approach in South Africa.

Detoxification

Detoxification, the first step of treatment, allows the addict to engage in the most important step of treatment, namely relapse prevention. It involves a graded and controlled reduction in tolerance to opioids, minimising unpleasant withdrawal symptoms. It is important to ensure that a treatment plan is in place before detoxifying an addict. Two medication groups are used for detoxification, often in conjunction: opioid substitution and symptomatic medication.

Substitution detoxification involves the use of either a full agonist, e.g.
methadone, or a partial opioid agonist, e.g. buprenorphine. These medications are prescribed at an individualised dose that alleviates withdrawal symptoms without causing intoxication. The medication is then gradually reduced, usually over a period of 1 - 3 weeks, allowing the level of tolerance to normalise in a manner that is tolerable for the addict. It is important to ensure that patients are in withdrawal (objective rating scales may be useful, e.g. Clinical Opioid Withdrawal Scale) before substitution opioids are administered, to prevent accidental overdose (full agonists) or precipitate withdrawal (partial agonists).

Symptomatic medications alleviate some of the withdrawal symptoms and are used for mild withdrawal or to reduce the requirement for substitution opioids. The alpha-2 agonist clonidine may be used to alleviate some of the withdrawal symptoms and are used for mild withdrawal or to reduce the requirement for substitution opioids. The alpha-2 agonist clonidine may be used to relieve adrenergic withdrawal symptoms. Other symptomatic medications include anti-diarrhoea drugs, anti-emetics, hyoscine butylbromide (abdominal cramps), non-steroidal anti-inflammatory drugs (muscle aches), paracetamol (headaches), antacid (indigestion), sedative-hypnotics or hydroxyzine (insomnia) or benzodiazepines (cramps, irritability, dysphoria, anxiety). Benzodiazepines should be used with great care because of the risk of overdose with opioids and partial opioid agonists and the risk of co-morbid abuse and dependence. Non-medications include hot/cold packs, relaxation, baths, massages, rubbing ointments, music, acupuncture, aromatherapy, etc.

Outpatient detoxification should be considered only in selected cases where it is considered safe (risk of overdose and death). An infrastructure for daily supervised consumption of substitution opioids and regular (daily if possible) follow-up and careful monitoring via random drug testing is required. Methadone should be used with great caution in outpatients, because of the risk of accidental overdoses; buprenorphine may be a safer option. Inpatient detoxification is safer.

Patients should be educated that their level of tolerance is reduced during detoxification. The dose of illicit opioid that was used prior to detoxification may subsequently cause overdose.

Relapse prevention

Relapse could be viewed as a learning and growth opportunity. Many clients find that engaging in an aftercare programme, e.g. a self-help support group like Narcotics Anonymous, provides them with a useful support structure and may reduce relapse.

Substitute opioid prescription

Some addicts are desperate for help but are unable to give up their opioids, and interventions to reduce harm may be considered until they are able to achieve total abstinence.

Substitution prescription of opioids, though not widely used in South Africa, is well established internationally and is supported by a large body of research literature and clinical practice. Maintenance treatment with methadone has proven effectiveness, provided that adequate dosages are prescribed and appropriate supervision is ensured. An infrastructure for daily supervised consumption of substitution opioids and regular (daily if possible) follow-up and careful monitoring via random drug testing is required. Methadone should be used with great caution in outpatients, because of the risk of accidental overdoses; buprenorphine may be a safer option. This provides the opportunity to stabilise the addict's lifestyle, develop insight and reduce harm from illicit drug use.

Methadone maintenance has been shown to reduce morbidity and mortality associated with heroin dependence and to improve treatment retention. It has a better outcome than detoxification and psychosocial interventions. The same is true for buprenorphine.

The only formulation of methadone available in South Africa is Phystepone syrup, at a concentration of 2 mg/5 ml. This alcohol-containing cough syrup has a high sugar content and high viscosity, making accurate dispensing difficult. Users have to consume large volumes of the diluted formulation syrup (v. the 5 mg/5 ml formulation available abroad). Methadone is not currently registered for the management of opioid dependence in South Africa (off-label use). Methadone has good oral bioavailability and its long half-life allows for daily oral dosing. Because of its full agonist action, methadone substitution could be associated with a risk of accidental overdose. Ideally, the alcohol- and sugar-free 5 mg/5 ml elixir (not available in South Africa) should be used for substitution prescribing.

Buprenorphine is available as 2 or 8 mg sublingual tablets and its long half-life allows for once-daily or alternate-day consumption. Because it is a partial agonist, with increasing dose the effects plateau, making it safer and less likely to result in accidental overdose than full agonists. Individuals also report a ‘clearer head’ with buprenorphine, in contrast to the ‘mental clouding’ sometimes experienced with methadone. The choice of substitution drug rests with the prescribing physician. A higher level of tolerance, patient preference and contraindications to use buprenorphine may be indications for choosing methadone.

Substitution prescription poses risks if unregulated, including unsafe practice by inexperienced medical professionals, unethical practice, black-market diversion and ‘doctor hopping’. It is important that accreditation, guidelines and proper legislation be put in place to ensure that doctors who do substitution prescribing are properly trained. Only medical practitioners who have received training or have experience in substitution prescribing should provide this treatment.

Diversion of medication to the black market remains a valid concern, and adequate supervision of patients with regard to opioid dispensing and consumption is essential. A patient register would help to prevent ‘doctor hopping’.

The ultimate aim of opioid substitution treatment is eventual dose reduction and abstinence when the individual is...
ready, and treatment goals should be reviewed every 3 - 6 months. Some argue that a small number of addicts require lifelong substitution therapy owing to a relative endogenous opioid deficiency. Better results are obtained when opioid substitution is continued for at least 1 year before attempts are made to reduce the dose.

Declaration: The author served as a member of the Shering Plough Advisory Board.

The review of the working group is available in the SAMJ via www.samj.org.za, April 2008.

References

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