Update on dependency and rehabilitation

Medical treatment of opioid dependence within the South African context

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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.[1] 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[2] or motivational interviewing.[3] 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.

Medical treatment of opioid dependence

The aim of treatment for opioid dependence is total abstinence from all opioids. In clinical practice, the short-term success rate for total abstinence is low, even following inpatient treatment. Total abstinence remains an achievable goal for a significant minority of patients and an attempt at psychosocial rehabilitation aimed at total abstinence is warranted for most patients. Despite poor short-term outcomes, most patients eventually go into remission.

It is important that South Africa develops the capacity to provide substitution prescription in a safe and controlled manner.

Given the chronic relapsing nature of opioid dependence and frequent poor results of rapid detoxification and relapse prevention, treatment to reduce drug-related harm (keeping patients alive until they eventually go into remission) and abstinence from *illicit* opioids has become an important intervention in many countries. This includes the use of long-term oral substitute opioids until the addict is ready to change and remain sober. Harm reduction is not widely accepted in South Africa and there is limited experience among clinicians, poor infrastructure and no legislation to accommodate opioid substitution therapy. It is important that South Africa develops the capacity to provide substitution prescription in a safe and controlled manner.

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[2] and motivational interviewing[3]) 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,[4] or a partial opioid agonist, e.g. buprenorphine.[5] 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[6] 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

A relapse prevention programme must be in place prior to embarking on detoxification. Psychosocial interventions provide individuals in recovery with the skills to maintain sobriety and include cognitive behavioural therapy, motivational enhancement therapy and spiritual 12-step programmes, and address social needs such as homelessness, unemployment and family reintegration.

Limited pharmacological interventions are available. Naltrexone is an opioid antagonist that blocks opioid receptors without producing an effect, making it difficult to get high. It has been used orally, as a depot monthly injection or as a longer-term implant formulation. Naltrexone is no longer registered in South Africa, but can be prescribed with Medicines Control Council (MCC) approval by doctors experienced in treating opioid disorders and ordered from overseas, e.g. via an online pharmacy.

A relapse prevention programme must be in place prior to embarking on detoxification.

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.[7] Maintenance treatment with methadone[8] and buprenorphine[9] 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[10] and mortality[11] associated with heroin dependence and to improve treatment retention. It has a better outcome than detoxification and psychosocial interventions.[12] The same is true for buprenorphine.[13]

The only formulation of methadone available in South Africa is Physeptone 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.

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Addiction treatment

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Addiction is not well understood. There are a number of important questions that still need to be answered scientifically if we are to make any inroads in addressing this important public health problem:

- Why does addiction continue despite the serious negative and sometimes catastrophic consequences for the person with the disorder?
- Why is addiction sometimes so resistant to treatment?
- Why is relapse so common that some even consider it a defining feature of addiction?
- Why does addiction so frequently co-occur with other psychiatric disorders?

Efforts to answer these and other questions have typically tried to identify a singular mechanism responsible for addiction. Although most approaches are successful to varying degrees in accounting in part for a restricted set of phenomena related to addiction, they provide neither a comprehensive understanding of addiction nor have they resulted in treatments that are ubiquitously successful and produce lasting change. Perhaps the singular process approach has had such limited success because addiction is a complex, multi-component phenomenon.

Addiction treatment is often described as 'rehab'. Indeed, a current popular song by yet another UK miscreant lists the reasons why she 'don't want to go to rehab'. Implicit in the description of addiction treatment as rehab is the notion of failure. People with addictive disorders have failed themselves and society and therefore need to be rehabilitated. It is reminiscent of the Gulag, where people with ideological failure required political rehabilitation. Addiction treatment needs to be described for what it is, namely the treatment of a diagnosable entity, but therein lies the crunch. As we step gingerly into the 21st century, there remains no consensus as to what defines, constitutes or causes addictive behaviour.

In the absence of a universally accepted model of understanding of addiction, the area of treatment remains equally ill defined. This ranges from the faith-based treatment centres who, when asked to produce their treatment manual, will show you a Bible, to the more sombre disease model theorists who resort to a traditional biological model of understanding as the basis of intervention, to the mutual help 12-step programmes that sometimes proclaim a monopoly over the intervention process with a fundamentalist zeal. A broad body of experts sees addictions as arising from psychosocial variables in a person's environment, which would necessitate interventions at that level. So where does the truth lie, and what is the practitioner faced with a distraught addict and family in his consulting room to do?

The addiction treatment field today has two intrinsic shortcomings that make it very vulnerable to exploitation by anybody with an entrepreneurial edge and a smattering of knowledge about the problem. Firstly, the paucity of scientific knowledge about the condition means that charlatans and snake oil salesmen can have a field day; secondly, a patient population, very often with a degree of desperation, leaves people open to exploitation. We have seen the growth of a treatment industry in this country over the past 5 years that parallels the growth of a fast-food chain.

The Department of Social Development has attempted to correct this situation. In an attempt to introduce benchmark norms and standards, the Department took the Noupoort Treatment Centre, a faith-based facility, to court. Noupoort won, effectively establishing the principle that a facility with an infrastructure, a programme and accountability to a Board of Trustees could register as a treatment centre. While this inclusive approach is to be lauded, the Department seems relatively disinterested in the content of the programmes, and the registration of a facility is now virtually available on request.

To a certain extent this has defeated the purpose of the exercise and has merely resulted in a register of facilities with no real scrutiny of norms and standards. The net effect is that facilities receiving departmental approval are now able to apply for a BHF registration, which allows them to access medical aid funding for services rendered. This in itself is not a problem but it does mean that those facilities that provide a more formidable professional service are remunerated at a similar rate to the more fragile facilities. The health insurance industry is delighted, as competition between various facilities irrespective of quality of care they provide, will help keep the price of treatment interventions down. However, it does leave the profitability and viability of the more orthodox treatment centres at risk, and they now often seek improved income streams by sourcing patients from abroad. This effectively subsidises local

patients whose treatment intervention is remunerated by discounted medical aid rates.

South Africa is definitely a proud frontrunner, in that the 1998 amendments to the Medical Schemes Act mandated addiction treatment and most medical aids now fund treatment. The Council for Medical Schemes needs to be acknowledged for this progressive legislation, which effectively identifies addiction as a condition warranting treatment.

Overseas patients

The growth of the overseas addiction treatment referral industry has been an interesting phenomenon in South Africa over the past 5 years. While this phenomenon has not been confined to addiction treatment and now ranges from infertility procedures to cosmetic surgery, South Africa has become a target destination for addiction treatment for patients from overseas. Besides the obvious advantage of a favourable exchange rate that makes treatment much more affordable in this country, the steady stream of patients from abroad is equally a compliment to the quality of care provided by South African treatment centres.

An interesting addendum in recent times has been the emergence of overseas-based treatment referral agencies that have piggy-backed themselves onto the local treatment system. While the enterprise can been very profitable for all parties engaged in the business, the trans-national nature leaves many unanswered areas, including medicolegal accountability, undefined professional responsibility (especially when things go wrong) and, sadly, a concentration of the best South African treatment talent focused on foreign nationals.

Myths

Three myths persist around addiction treatment. The first is that addicts never get better irrespective of the intervention. All addicts are doomed to relapse sooner or later and treatment is rarely successful. While the prognosis for an addictive disorder is often very guarded, this myth raises the question of what constitutes a successfully treated addict. Is lifelong abstinence, one day at a time, the only measure of success, as many of the 12-step fellowships would have us believe, or is a post-treatment *pro rata* reduction in substance use in a less hazardous fashion also reflective of a successful treatment intervention? What role does quality of life play in assessing treatment outcomes, for abstinence does not necessarily imply contentment with life. Traditionally, abstinence has been a golden yardstick of success but in a condition characterised by relapse, is it fair to regard a return to active use as a sign of treatment failure? Often the quantum of treatment is determined by factors unrelated to the gravity of the condition.

Addiction treatment is about a conversation with the patient in an attempt to revise his cognitions and encourage a choice to engage in less self-destructive behaviours.

The second myth about addiction treatment is that nothing ever works, in the sense that irrespective of the intervention, addicts get better when they choose to get better. Until that moment arrives, all attempts are in vain and doomed to failure. While it is true that the decision to address an addiction begins with a choice, treatment interventions at their most elementary aim to facilitate that choice by identifying and deconstructing the obstacles that prevent the choice. In truth, recovery from addiction is neither rocket science nor a miracle.

Successful addiction treatment has three objectives. Firstly, it will identify and remove the obstacles that prevent acceptance of the condition by removing the multiple rationalisations that surround the behaviour. Secondly, it will provide the addict with a working understanding of the condition such that abstinence becomes a meaningful exercise and, thirdly, it will help the patient find a sustainable commitment to the choice of sobriety and recovery. Very often, each treatment intervention simply moves the patient closer to making the decision and if that is achieved, the intervention may be regarded as successful. Most heroin addicts, for example, will require at least three treatment interventions. People come in to treatment with differing degrees of motivation. Most have been painted into a corner in one way or another and come in to treatment to sustain their addiction, not to address it.

By the same token, there are people who can achieve sobriety and an understanding of their own recovery without the inconvenience of a treatment programme. However, making sense of an addictive disorder on one's own without the benefit of a third-party intrusion in the form of treatment intervention is an arduous task. Addictive thinking always factors itself subconsciously into the conversation in a subtle way. Addiction treatment is a prolonged conversation with a person whereby mistaken beliefs are identified, cognitions are revisited and a narrative is rewritten. Although recovering from an addiction at times appears miraculous, it is not a miracle. The event does not require patients to do something extraordinary, but simply to choose, for their own safety, to refrain from substance use and other addictive behaviours one day at a time.

The third myth about addiction treatment that many facilities parade loudly is that their treatment modality is superior to that of another. While this has never been proven, the truth is that most psychosocial interventions have more or less the same outcomes. Therefore, the patient's needs and resources rather than the treatment centre's claims of excellence very often determine the selection of a treatment programme for a particular patient. Ironically, in a complex and thorough meta-analysis of the alcohol treatment outcome literature published in 1995, Miller *et al.* showed that the brief intervention, which is a category of intervention, could be cost effective and successful for people with problems of an earlier or less severe quality.

Where does this leave the practitioner faced with an addiction problem in his consulting room? Addiction treatment is about a conversation with the patient in an attempt to revise his cognitions and encourage a choice to engage in less self-destructive behaviours. In patients unable to resolve this conflict themselves, I would strongly recommend referral to a treatment facility where a more intense dialogue may help resolution of the variables. Like all malignant conditions, early intervention presages a more favourable prognosis.