Narcotic Abuse: Effects and Treatment

Dato' Dzulkifli Abd Razak

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THE TERM NARCOTIC REFERS TO opium and opium derivates or synthetic substitutes. narcotics are also generally called opiates or opiods. Opium comes from the poppy plant *Papavar somniferum.* The milky fluid that oozes from incisions in the unripe seedpod of the plant are scraped by hand and air-dried to produce opium gum.

A more modern method of harvesting is through the industrial poppy straw process of extracting alkaloids from mature dried plants. The extract may be in liquid, solid or powder form. Most poppy straw concentrates made available commercially is a fine brownish powder with a distinct odour.

Poppy plants were grown in the Mediterranean region as early as 300BC. Since then, it has been cultivated all over the world, including Hungary, Yugoslavia, Turkey, India, Burma, China and Mexico. Currently, one of the largest poppy fields is located at the Indo-Chinese border area known as the "Golden Triangle". The plant is now the main source of non-synthetic narcotics.

Today, there are local and international laws governing the production and distribution of narcotic substances in order to curb illicit trafficking of the substance worldwide.

There are at least 25 active chemicals called alkaloids that could be extracted from opium. These fall-into two general categories, each producing markedly different effects.

The first - phenatrene alkaloids - represented by morphine and codeine, are used as analgesics and cough suppressants. The second - isoquinoline alkaloids - represented by papaverine (an intestinal relaxant) and noscapine (a cough suppressant), have no significant influence on the central nervous system.

Until the early 1900s, there were no legal restrictions on the use of opium. Infact many medicines used to contain opium without any warning labels. In a similar vein, other types of narcotics were also once used as medicines. These included morphine and heroin. The latter was first synthesised from morphine in 1874. It was extensively used in medicine by the beginning of this century.

The Bayer Company in Germany first started commercial production of heroin as a new pain remedy in 1898. It received widespread acceptance. In fact, the name heroin was derived because it made the user feel "heroic." Still, the medical community remained unaware of its potential for addiction for years.

However, the advent of heroin eventually caused global concern about the problems of narcotic abuse and dependence. This is partly because heroin is 10 times more potent than morphine and able to enter the brain much more rapidly to exert its effects. Then in 1914, through the implementation of the Harrison Narcotic Act, the first comprehensive control of heroin in the United States was established.

Although some narcotics, especially morphine and codeine, remain indispensable in medical practice, their uses are strictly controlled. They are administered orally or through intramuscular injections under medical supervision for the relief of intense pain.

As drugs of abuse, however, they may be sniffed, smoked or self-administered through skin-popping and intravenous injection. The relief of suffering, whether of physical or psychological origin, may result in a short-lived state of euphoria.

The initial effects, tough, are often unpleasant, leading many to conclude that those who persist in their illicit use may have latent personality disturbances. Narcotics tend to induce pinpoint pupils, reduce vision and cause drowsiness, apathy, decreased physical activity and constipation.

A larger dose may induce sleep but there is an increasing possibility of nausea, vomiting and respiratory depression - the major toxic effects of opiates. In acute intoxification, there is a loss of motor coordination or slurred speech.

The addict's entire life is built around drug taking. Since addicts tend to be preoccupied with the daily round of taking drugs, they often neglect themselves and may suffer from malnutrition, infection and unattended diseases or injuries.

In addition, illicit drugs are rarely pure. A "joint" - slang used for a single dosage unit of heroin - may contain as little as 5% heroin. To increase the bulk of the material sold to addicts, diluents are mixed with heroin in ratios ranging from 9:1 to 99:1. Sugars, starch, powdered, milk, food colouring, cocoa, brown sugar, quinidine and talcum powder are among the diluents used.

There is also the risk from the use of unsterile needles and injection techniques. This can result in abscesses, blood poisoning, hepatitis and HIV.

Since there is no simple way to determine the purity of a drug sold on the street, the potency is unpredictable. A person with a mild overdose may be stuporous or asleep. Larger doses may induce a coma with slow shallow respiration. The skin becomes clammy and cold, the body limp and the jaws relaxed. There is a danger that the tongue may fall back, blocking the air passage. If the condition is sufficiently severe, convulsions may occur, followed by respiratory colapse and death.

Repeated use of drugs will result in increasing tolerance. So, the user must administer progressively larger doses to attain the desired effect, reinforcing the compulsive behaviour known as drug dependence. A tolerant user may require as much as 50 to 100 times more than the initial dose to prove a brief "high."

Chronic use of narcotics can produce significant tolerance and dependence not only in the user but also in the foetus carried by the user if the user is pregnant.

Physical dependence refers to an alteration of the normal functions of the body that necessitates the continued presence of a drug to prevent withdrawal symptoms. The intensity of physical symptoms experienced during the withdrawal period is related directly to the amount of narcotic used each day.

With the deprivation of narcotics, the first withdrawal signs are usually experienced shortly before the time of the next scheduled dose. Compliants, pleas and demands by the addict are prominent, increasing in intensity and peaking from 36 to 72 hours after the last dose, then gradually subsiding.

Symptoms such as watery eyes, runny nose, yawning and sweating appear after eight to 12 hours after the last dose. Thereafter, the addict may fall into a restless sleep.

As the symptoms progress, restlessness, irritability, loss of appetite, insomnia, "gooseflesh," tremors and finally yawning and severe sneezing occur. These symptoms reach their peak within 48 to 72 hours. The addict will be weak and depressed.

Stomach cramps and diarrhoea are common. Heart rate and blood pressure are elevated. Chills which alternate with flushing and excessive sweating are also characteristic symptoms. Pains in the bones and muscles of the back and extremities occur as do muscle spasms. At this time, the addict may become suicidal.

Without treatment, the symptoms run its course and disappear within seven to 10 days. The duration it takes to restore physiological and psychological equilibrium is unpredictable.

For a few weeks following withdrawal, the addict will continue to think and talk about drug usage and will be particularly susceptible to the urge to get back to the habit.

Withdrawal symptoms may be avoided by reducing the dose of narcotics over a one to three-week peroid. Detoxification of an addict (for illicit narcotics) is accomplished quite easily by substituting it with the drug methadone and then gradually reducing the dose of methadone administered. In fact, methadone was synthetised by German chemists during the Second World War when there was a shortage of morphine.

Naltrexone, is a fairly recent drug used in the treatment of drug addicts. It is a non-narcotic substance that works by blocking the receptor sites for narcotics. In this way, it also inhibits the effects of narcotics.

Naltrexone will not give any narcotic-like effects or cause mental or physical dependence. However, it will precipitate withdrawal symptoms in addicts who're physically dependent on narcotics. The reaction can be very severe. Naltrexone treatment therefore is commenced only after the addicts are no longer using the drug, for at least about two weeks. The actual lag in time depends on the drug of dependence, the amounts used and the duration of abuse. Naltrexone should be used only under the supervision of a competent health professional so that no unnecessary problems arise from its use.

Moreover, there are many side-effects that could be associated with the drug which may require medical attention. For example, skin rashes, headaches, nausea, vomiting, restlessness and unusual nervousness or tiredness are quite common. Others which are less common include abdominal cramps, blurred vision, confusion, earache, fever, hallucination, nosebleed, tinnitus, swelling of face, feet or lower legs, swollen, glands and unusual weight gain.

Naltrexone in any case is not a cure for addiction. It is normally used as part of an overall programme that counselling, support groups and other treatments recommended by the doctor. Trying to overcome the effects of naltrexone by taking large amounts of narcotics can result in coma and death. This is important to remember, especially when using medicines that contain narcotics to treat pain, diarrhoea or cough.