



Vol.38, No. 1-3

January-March, 2008

PATTERN AND PROCESS OF DRUG AND ALCOHOL USE IN INDIA

World Drug Report 2006 of United Nations has given a figure of 16 million opiate addicts world-wide. This figure is not inclusive of other addictives or alcoholics¹. Opiate is the prime drug of abuse. According to a 2004 United Nations Office on Drug and Crime (UNODC) and Govt. of India report, India alone has nearly 9 million cannabis users, followed by 2 million opiate users and 0.3 million sedative hypnotics users. Besides, 62 million alcoholics (as big as that of the population of France) were reported in India.

Historical Profile of Intoxicant Usage in India

Opium was brought to India by the Arab traders in the 9th century via the west coast and was primarily used for medicinal purposes. By the next century opium use was wide spread and included social functions. By the turn of 14th century recorded mention of opium as a product and its cultivation along the west coast at Cambay and Malwa was reported amply². Historically the use of cannabis products predates the use of raw opium³. Founder of the first Moghul dynasty-Babar (1524-1530) encouraged poppy cultivation and sale of opium became state monopolies and soon was an important article of trade with China and other eastern countries. By 1757 the British East India Company took

over the opium monopoly and the British attempted to popularise its use to increase revenue. Opium growing stretched for 500 miles in Bengal with more than a million registered farmers growing opium plants for the East India Company in 500,000 acres of prime land^{2,4}.

By early 18th century (1720) China imported 15 tons of opium from India, increasing to 75 tons by 1773 and by the early 19th century it finally stabilised at around 250 tons. By the middle of 19th century (1840) when all restrictions were lifted, it had increased to 2,555 tons. India derived substantial revenue from the sale of opium and the total revenue in about 40 years was £375,000,000⁴. Smoking of opium began only in the 19th century and remained less popular than oral consumption⁵. By the end of 19th century (1893), attempts to pressure the government for the suppression of the opium trade led to a Royal Commission: its conclusion was prohibiting opium was impossible. Ahead of independence, by 1946 the eating and smoking of opium was prohibited; exceptions were made for registered addicts who had to produce a medical certificate to receive their supply of opium. By 1959 the sale of opium was totally banned and oral consumption was prohibited except for registered addicts on medical grounds⁶. In 1959, registered opium addicts was 4,32,609 though it fell to 80,000 by 1975⁷.

By the latter half of twentieth century a variety of drugs were available and increasingly used by younger people. Besides, various hypnotics, sedatives, stimulants and hallucinogens cannabis became too popular. But pethidine and morphine was used in small numbers⁸.

During the period 1969 and 1978 various epidemiological studies of mental illness reported that 0.04 to 17% patients used various drugs including cannabis and opium. By early 1980s, India was the main opium producing country and became the only supplier of licit opium for the world's requirements. Though of late Afghanistan became the prime illicit opium producer (90%) of the world. During 1980s and in the early 90s legally cultivated opium was being diverted and converted into heroin. In the beginning of 1990s it was estimated that there were nearly five million opium addicts and 750,000 to one million heroin addicts. In Bombay alone it was estimated that 100,000 people were addicted to 'brown sugar'⁹. Around late 1980s, and in the 1990s, injecting drug users (IDU) became increasingly prevalent: this was accompanied by an explosion of HIV infections, first detected in the northeastern state of Manipur^{10,11}.

Drug and intoxicating beverage use in India had various connotations and manifestations over the centuries. Almost upto the middle of the last century intoxicant usage for religious and ritual consumption to an extent for medication as well was given broad socio cultural and legal sanction.

Social and Functional Uses

Opium use was more functional than that of cannabis. During the Mughal period, it was stated that the Emperor occasionally indulged recreationally in opium and kuknar, a beverage prepared from poppy capsules. Most nobles of Akbar and Jehangir's courts drank charburgha, a mixture of hemp, opium, wine and kuknar¹².

The Rajputs used opium in important social functions such as marriage, when sealing important business deals, for longevity and to enhance sexual pleasure. A study carried out in Rajasthan also stated that the region is known for its traditional use of raw opium in the form of anal or doda (poppy straw), due to its climate and difficult living conditions. A large extent of eco stress management is done by the people of Rajasthan by using opium and its natural derivatives. The ethnographic information suggests that opium use is in many ways integrated into the socio-cultural fabric of the local

community. Self-medication with opium mitigates various health problems and the drug is also used to relieve mental distress. Besides the drug is used recreationally and within settings which facilitate social bonding¹³.

Opium has long been used in critical situations such as battles and wrestling. It has been observed that wrestlers who took opium performed feats that would ordinarily have been beyond their strength. Warriors facing do-or-die situations also took it. This practice persisted until fifty years ago among army personnel, to help manage daily hardships and in battle. In many regions, now alcohol has replaced opium. However, even today an opium drink plays an important role in our culture. In the desert regions of Rajasthan and Gujarat, the host offers his/her guest opium to drink in the cupped palm of the hand as a mark of respect.

Opium has been used to kill unwanted newborn baby girls, and given to children, mixed with sweets, as a sedative, to help them sleep or to keep them docile. Women field workers used it to keep their children out of mischief. In industrial areas such as Mumbai, Kolkata and parts of Uttar Pradesh, women factory workers similarly gave opium to their children .

Social Use of Cannabis

Cannabis was consumed in a drink called thandai (it is a solution made of water, sugar, seeds of different fruits, rose petal, cashew nut, white pepper and cannabis paste) during hot summers in central, eastern and north-western India. Besides being cool, thandai is nutritious, as it contains almond proteins and fats with high caloric value. From March to October, the heat causes heavy perspiration; thandai compensates for the consequent loss of salt. The preparation and consumption of kasumba (opium liquid with several other ingredients) is an elaborate ritualised ceremony in many parts of India among family, community or group of friends from the village or neighbourhood gather in the host's parlour.

Medicinal Use

Cannabis has a place in the Ayurvedic Materia Medica and in Tibbi medicine. The Indian Pharmacopoeia of 1954 lists two preparations of cannabis, a liquid extract and a tincture, as officially sanctioned. Cannabis served as a hypnotic, analgesic and antispasmodic agent and in rural areas as a prophylactic and to treat dyspepsia, pain, rheumatism, dysentery, diarrhoea, hysteria,

gonorrhoea and cholera. Medical use is always oral. Cannabis is used in Nepal, in addition to the above ailments, for tetanus, insomnia, cough, digestive problems, lack of appetite, malaria, as an aphrodisiac, to relieve fatigue and strain, and for general age-related ailments. For medical purposes, cannabis is used in combination with other herbs or ingredients.

For example, the compound used for diarrhoea and cholera contained cannabis and fifteen other ingredients including dried ginger, black pepper, nut grass, sea salt, black salt, opium, and the ashes of a clamshell. Cannabis used in these preparations was washed seven times with water in a cloth to remove impurities. Despite its medicinal value, Ayurvedic practitioners believe that, as with alcohol, over-indulgence in cannabis could be hazardous.

Opium is often mentioned in the *Materia Medica* section of *Sharangadhar Samhita* and *Bhavaprakash* and is used in several preparations. Hindu physicians in the fifteenth century used it freely. It was said to cure the concurrent derangement of three humours, increase sexual and muscular powers and produce stupefaction of the brain. Later, especially during the last two centuries, opium became part of eight Ayurveda preparations: *Karpua rasa*, *Ahiphenasava*, *Brihat Gangadhar churna*, *Markandeya churna*, *Dugdha vati*, *Grahanikapta rasa* (*Rasendra sara sangraha*), *Akrakaravadi churna* (*Sarangadhara*) and *Sambhunath rasa* (*Bhaishajya tantra*).

Nowadays, those with formal Ayurvedic training in medical colleges use opium rarely, mainly for diarrhoea and dysentery, and only at certain stages of these conditions. Hindu physicians never made much use of the sedative and pain-relieving properties of opium.

Tibbi physicians had extensive knowledge of opium and used it far more often than other practitioners. They obtained this knowledge from Arabic medicine, where opium is described as an anesthetic and analgesic. They use it for relief of pain, drying of catarrh, for coughs, asthma, hiccups, treatment of manic delirium and inflammatory conditions of the brain, diarrhoea, dysentery, facial paralysis, epilepsy and similar nervous conditions.

Present Scenario

India ranks second to Afghanistan in production of licit opium and probably the only country producing gum as found by the Indian Central Bureau of Narcotics.

Opium poppy is grown in the central Indian state of Madhya Pradesh (Mansaur), Rajasthan (Kota, Jodhpur, etc.) and Uttar Pradesh (Gazipur). By the turn of the century the Indian government licensed nearly 160,000 farmers to cultivate opium on 35,000 hectares. In the year 2000 over 1,300 metric tons of opium was harvested, the largest amount in many decades. In 1999 an estimated 300 metric tons of licit opium was diverted to the black market, converted into heroin 'brown sugar' and sold. Ten per cent of the diversion of opium gum would make India the world's fourth largest producer of illegal opiates. Afghanistan produces almost 90% of world opium followed by Myanmar. Many of the Indian states i.e. Jammu and Kashmir, Uttar Pradesh, Manipur, Mizoram, Nagaland and Arunachal Pradesh¹⁴ have been found to indulging in illegal growing of opium poppies.

Since the early 1980s use of opium derivatives like heroin has been wide spread in the major metropolitan cities of India like New Delhi, Kolkata, Chennai and Mumbai, etc. and most of what is available is impure and crude. A purer variety known as 'white sugar' or 'number four' is available in the states of Manipur, Nagaland and Mizoram, which are closest to the source of heroin. A part of the heroin available in India is trafficked from the Golden Triangle, in particular from Myanmar. In Manipur, heroin has been sold since 1973 and its use has become widespread^{15,16}. During the 1990s injecting pharmaceuticals, in particular buprenorphine took an epidemic proportion and often used as an alternative among heroin users. It has been witnessed in all the major metropolitan cities and has not stopped^{17,18}. Heroin, hashish and morphine base from Afghanistan, Pakistan, Myanmar and to a smaller extent Nepal gets the conduit of India for its onwards transmission. Nearly 32% of heroin seized in India has its origins in Afghanistan or Pakistan.

Traditional Intoxication

The tribes use drinks and drug on various occasions. The local brew like toddy, arrack and Mahua are different addictives used in different parts of the country in different occasions like harvest, marriage, birth or death of child or during celebration of local festival¹⁹. Shukla in his ethnographic study of a UP village reported that alcoholic drinks and plant products had different roles and varying degrees of acceptability and values in various sub groups of the village community. The drug use pattern appearing on local levels were of two types

ceremonial/ ritualistic and convivial use. The convivial use showed a wide range of variations from one social group to another, while ritualistic and ceremonial use were confound to particular religious ceremonial or festive occasion. Among Rajputs, alcohol consumption was a group ritual and the aim of drinking was purely to become inebriated as quickly as possible. Public inebriety was not forbidden for these men. It had cultural sanction¹⁹. Similar, practice have been found among the Rajput men, while taking opium in community gathering. During the moment of conviviality they are flanked and supported by lesser mortals Bhils, a scheduled tribe. And on some rare occasions an elderly Rajput women would also indulge in similar practice of limited public inebriation, while taking opium.

Addiction Pattern and Embedded Risk

In rural Rajasthan swallowing and smoking of opium is very common. It comes in two forms either as a nugget or a powder. The nuggets are first dissolved in water and what is extracted in the filtering process is swallowed. The powdered form is placed into an earthen clay pipe and smoked. Heroin, brown sugar, appeared on the Indian market in the early 1980s and it effectively displaced opium and cannabis as the drugs of choice²⁰. The introduction of the Narcotics and Psychotropic Substances Act 1985 which criminalized opium use, had some impact in affecting drug users to shift from cannabis and opium to inhaling heroin.

Widely accepted way of taking heroin is through inhalation or chasing the fumes emitted from the heated heroin on a thin silver paper (mostly taken from cigarette casing) through a small pipe. A miniscule of drug users have converted smoke able heroin into an injectable preparation using citric acid, vitamin C tablets or lemon juice. In Mumbai, heroin users tend to a cocktail heroin with avil in the belief that the impurities of heroin will be taken care of. The low prices for heroin were not stable and for many street drug users it proved to be exorbitant. During the late 1980s and early 1990s, the pharmaceutical buprenorphine became popular and its availability in ampoule form made it injectable; this drug and mode of administration became popular throughout most major cities of India and adjoining states^{17,21}.

Paradoxically enough, buprenorphine due to its antagonistic and agonistic property has become both drug of choice for the physicians to treat the opium

addicts on one hand while the addicts rush more and more in number to detoxification center to get treated by the said drug and get hooked to it subsequently.

Buprenorphine pushers found that the high was lacking and as a result, many drug users administer by injection a combination of diazepam, avil and phenergen with the buprenorphine. Even though these non over the counter drugs were managed by the addicts from the black market or by paying additional money to a pharmacist to dispense with a doctor's permission²². Poly drug use is widespread in India and is believed to be associated with an increase in fatal drug overdoses (UNDCP and UNAIDS 2000). By nature (manufacturing standard) each ampoule of the pharmaceutical drug is two ml and the users will take half of it from each ampoule for injection. Addicts buy heroin and pharmaceutical mixes after pooling money, sharing not only the same common solution but the same needle. Drug users range on an average from between two to five people while sharing the mix.

While heroin pushers may use the addictive two to four times a day, buprenorphine users and the pharmaceutical mixes tend to inject less often as a result of lasting kick. Drugs would be commonly administered intravenously but occasionally intra muscular injection is also seen. Injectable drug user were noted to pull and push the blood several times in the syringe before the final administration²³. Addictives are often used in India in open public places without any hesitation. While, those who are hesitant or apprehensive of enforcement authorities prefers abandoned or under construction buildings, public toilets, at home, offices, railway yards, and burial grounds. Though India does not appear to have a widespread culture of professional injectors, or 'street doctors', as in some other Asian countries, there do appear to be 'shooting galleries' where IDUs come to a site and inject²¹. As a general rule injecting equipment is discarded inappropriately. Often they are thrown onto garbage heaps in the neighbourhood, and even though they are a risk to the local communities, they are frequently collected by people, washed and sold to others at a cheaper price.

Intoxication of a mix of cannabis with tobacco is a common practice or at times it is made into a powder by removing the seeds, placing them in a chillum (an earthen pot used to hold the addictives) and then lighting the chillum for smoking¹¹.

In most of the cases pharmacies sell syringes and needles without any need for prescriptions. Though these are inexpensive, many drug users tend to focus on buying the drug rather than purchasing new syringe and needle. Glass syringes are regarded as no good for the purpose while, plastic syringes are the preferred choice.

Even though the injecting kit is very inexpensive, the use of improvised injecting equipment such as ink droppers fitted with syringes has been evinced. However, hypodermic needles and syringes are not common²⁴.

Among India's IDU community sharing of injecting equipment is widespread and in many circumstances it is considered normal. A recent Rapid Survey in India showed that most addicts had at some stage shared their needle and syringe (within a period of six months). It has been found that the rates of sharing in metropolis of Delhi, Chennai, Mumbai and Kolkata ranges from 50 to 78% , while Imphal tops with 86%²⁵. Though many druggies clean their injecting equipments, the majority did so inappropriately for protection against blood borne viruses such as HIV/AIDS and hepatitis C. While a large number of injectable drug users rinsed their equipment with readily available water, very few used boiling water, and fewer used bleaching soda²⁶. The IDUs also indirectly shared common spoons, solutions, cotton swabs and at the same time dipping of a needle into an ampoule of a pharmaceutical drug was also noted.

Prevalence and Potential Threats

Account of addicts in India have been always difficult task and this still remains the case. It was estimated in late 1980 and early 1990s that India had five million opium users and one million heroin addicts respectively. These figures are still used by government officials and UN sources. While non government sources, the level of heroin use consider much higher, a few disagree that in north-east India and in most urban cites drug use is a rising menace²⁷. By the beginning of 1990 it was estimated that there were 50,000 IDUs in India²⁸. In the latter part of 1990s figures from a assessment of injecting drug users in various Indian sites showed a major change in the estimates of drug pushers²⁹.

Most of the drug users in India are male but in many drug treatment centers female drug users may constitute up to 10% depending on the city and geographic region (UNAIDS and UNDCP). However, the drug treatment data

may not be an indicator of gender representativeness. Stigma is attached to women seeking assistance and many cannot seek treatment for long periods of time. In a recent survey on drug users, 15% repondants were female³⁰. A New Delhi study of female drug users (though of small sample size) shows that 30% were commercial sex work (CSW). Only 15% admitted to being IDUs, though, it was not clear if these people were also CSW²⁵.

Rapid survey data on drug use show that the onset of drug use in various major cities starts as early as 15 to 18 years of age. Experts agree that the ages of starting injecting are similar in most of the states. Sizeable number of drug users are from a lower socio economic status with substantial numbers having almost no education and they work in insecure positions or are unemployed. Forty two percent among IDUs of Kolkata could not read or write: it was nearly 50% among the non-injectors. Delhi also showed near identical result, although in Mumbai it was little better. However, in Meghalya among both injectors and non-injectors it was abysmally low (three percent)³¹.

Addicts health condition in India is often poor. Improper usage of needle causes ulcers, abscesses, cellulitis and thrombophlebitis among IDUs. Most of them are undernourished and have experienced excessive drug intake³².

Risk behaviours (having sex often with multiple partners) are common and a substantial number of IDUs and non-IDUs visit CSWs. Reluctance to use a condom with either a non-CSW or a CSW was common .

The HIV infection in India was reported in mid 1980s and was first identified in a CSW in Madras in 1986; the first case of AIDS was also detected in 1986³⁸. By the end of 2000 up to 82.6% HIV infection in India was from sexual transmission and 4.16% from IDU. By the end of the century (1997) it was estimated that 2.5 million people were HIV infected and by the turn of 2000 it increased to a total of 3.9 million (living with HIV/AIDS) in the reproductive age group (15-49). Incidentally India has the notoriety of the largest HIV/AIDS epidemic in the region. The city areas of Manipur observed surge of HIV from 61% in 1994 to 85% in 1997 and in 1998 it was nearly 88%³³.

In 2000 HIV infections among IDUs in different cities ranged from 2 to 49%; viz, Kolkata (2%), Bangalore (4.2%), Nagaland (7%), Mizoram (9.6%), Chennai (31%), Mumbai (23.7%) and Delhi(48.9%). A critical level of

10% prevalence or more was observed in many places causing great public health concerns. Among IDUs the transmission of HIV infection to their non-injecting wives increased from 6% in 1991 to 45% in 1997. The rise of HIV infection among pregnant mothers from 1.3% in 1994 to 2.7% in 1999 in Manipur is a case of concern⁴⁰.

Accountability of State to Illicit Drug Menace

Pronulcation of legal measures to curbe the illicit use of drug has been over due, however, the Narcotics Drugs and Psychotropic Substances Act 1985, and its amendment the Prevention of Illicit Traffic in Narcotics Drugs and Psychotropic Substance Act 1988, strengthened the state to confront the issue under the legal ambit. It is through these two Acts the punishments for various drug related offences can range from 10 to 20 years plus a fine of Rs 0.1 to 0.2 million. The latter Act has resulted in less draconian punishments in some cases where possession can be proved for personal use only. The death penalty can be imposed for certain offences for those with a previous conviction.

For example, a person convicted of involvement in production, manufacturing, possession, transporting, importing or exporting an amount equal or in excess of 10 kilograms (kg) of opium, one kg of heroin or 20 kg of hashish can be sentenced to death although the death penalty has yet to be carried through. Those convicted of possession or consumption of a small quantity of drugs for their own use are allowed to be released as long as they attend a de-addiction centre and within one year provide the court evidence of their medical follow up. Section 64 A of the Act allows for no prosecution to be imposed for a first time offender if the offence is related to possession of a small amount of drugs and the person agrees to seek drug treatment on a voluntary basis from a recognised institution. As a general rule the criminalisation of drug use has forced many drug users to choose drug treatment in order to evade imprisonment^{35,36}.

As per the record of the Ministry of Social Justice and Empowerment in 1992 there were 145 counseling centres, 86 de-addiction centres and 14 after-care centres and over three million registered drug addicts in the country. The approach adopted by the Ministry is to recognise drug use as a psychosocial-medical problem and involve as much NGOs as possible in care and cure of the druggies. Community participation has been encouraged by the government as part of the process

of care and cure, as it is not only cheaper but also maintains the link between the drug users, their families and the community. In north eastern states some unfortunate addicts with HIV are treated in hospices as well.

At present there are 72 government de-addiction centres and 123 NGO de-addiction centres respectively. Ministry of Health and Family Welfare has made provision of 300-450 beds in each major cities but still for a large drug using population getting treatment is often difficult. Treatment being expensive in many such centres limits access of the addicts. Ninety thousand people were admitted in 1998 for detoxification. Admission is generally on a voluntary basis but coercion by others have also been reported. Sending an addict by an authority or a GP to a psychiatric hospital is involuntary, while courts can send people to prison also (where drug treatment is generally unavailable).

Clonidine or dextropropoxyphene is used for opioid withdrawal as a symptomatic treatment which often needs to be paid for by the individual. Usually, relapse rates are as high as 80% and more³⁷. In most of the cases detoxification lasts for 6 to 20 days on an in-patient basis and rehabilitation can last from one to six months .

However, in places like Jodhpur, Rajasthan, camp approach of detoxification has been initiated in India and is in vogue for more than three decades now. The founder of the approach and rehabilitated inmates speaks high of the said approach of detoxification in terms of its cost effectivity³⁸.

Future Course of Action

Perhaps the most significant change may be the decline in the emotional fervor that once dominated public discussion of drugs. Public concern is still intense; nonetheless, there is wider public acknowledgment that simple, quick solutions to our drug problems will not be forthcoming. As a result, public expectations are more moderated development that may encourage more realistic law enforcement and control objectives.

Considering these to be changes for the better, the basic situation remains: Despite progress in a number of areas, more use and misuse of psychoactive drugs is reported than ever. Since, this situation will prevail at least through the next few years, it is necessary as a nation to plan carefully and thoughtfully as how to

handle it most responsibly. This planning requires a basic rethinking of national goals, policies, and strategies regarding the use and misuse of psychoactive drugs. The underlying social dynamics and problems that lead to drug misuse are so exceedingly complex as to as yet elude totally satisfactory solutions; the rational course, then, is to begin with what has been learned from history, particularly from the experience of the past several years.

The general observations regarding control of drug use is to get involved in the process of rethinking, but before coming to any conclusion of process evaluation and drawing a status paper for the complex phenomena, one need to remind one's self that there is no step-by-step blueprint for solving the nation's drug problems. However, indicate where past experiences and current analysis should direct the policy and the programme, which can help to strive toward more consistent, coherent, and responsible approaches to drug use and misuse in the future.

References

1. United Nations Drug Report, United Nations Organization, New York City, 2006.
2. Machado, T. Culture and Drug Abuse in Asian Settings: Research for Action. St John's Medical College Publications, Bangalore, India, 1994.
3. Roy, S. and Rizvi, S.H. Nicotine Water to Heroin. B.R. Publishing Corporation, New Delhi, India, 1986.
4. McCoy, A. The Politics of Heroin: CIA Complicity in the Global Drug Trade. Lawrence Hill Books, New York, 1991.
5. Hodgson, B. Opium: A Portrait of the Heavenly Demon. Greystone Books. Vancouver, Canada, 1999.
6. Emdadul, H. Politics of Prohibition of Narcotic Drugs in India: 1947 - 95. La Trobe University, Melbourne, Australia, 1997.
7. Ray, R. South Asia: Drug Demand Reduction Report. UNDCP Regional Office for South Asia, New Delhi, India, 1998.
8. Spencer, C.P. and Navaratnam, V. Drug Abuse in East Asia. Oxford University Press, Kuala Lumpur, 1981.
9. West, C.S. Turkey and India. In: International Handbook on Drug Control. Eds. S.B. McDonald and B. Zagaris. Greenwood Press Westport, United States, 1992.
10. Naik, T.N., Sarkar, S., Singh, H.L., Bhunia, S.C. and Singh, Y.I. Intravenous drug users - a new high-risk group for HIV infection in India. AIDS 5: 117, 1991.
11. Sarkar, S., Das, N., Panda, S., Naik, T. and Sarkar, K. Rapid spread of HIV among injecting drug users in north-eastern states of India. Bull Narcot XLV: 91, 1993.
12. Chopra, R.N. and Chopra, I.C. Drug Addiction with Special Reference to India. Council of Scientific and Industrial Research, New Delhi, 1990.
13. Ganguly, K.K., Sharma, K. and Krishnamachari, K. An ethnographic account of opium consumers of Rajasthan (India): socio medical Perspective. Addiction 90: 9, 1995.
14. Narcotics Control Strategy Report India Bureau for International Narcotics and Law Enforcement Affairs, New Delhi, 2000.
15. McGirk, T. Heroin's deadly tour: smugglers are now sending the drug through India to the West. Time 23: 42, 1996.
16. Eicher, A. IV drug Use and HIV Risks in Churachandpur, Manipur, India. A thesis presented to the faculty of the Department of Epidemiology and Public Health, Yale University, United States, 1996.
17. Dorabjee, J. and Samson, L. Self and community based opioid substitution among opioid-dependent populations in the Indian sub-continent. Int J Drug Policy 9: 411, 1998.
18. Dorabjee, J. and Samson, L. A multicentre rapid assessment of injecting drug use in India. Int J Drug Policy 11: 9, 2000.
19. Shukla, B.R. Drinks and Drugs in a North Indian Village- An Anthropological Study. Ethnographic and Folk culture Society, Lucknow, India, 1979.
20. Dorschner, J. Rajput alcohol use in India. J Stud Alcohol 44: 538, 1983.
21. Panda, S., Chatterjee, A., Sarkar, S., Jalan, K.N., Maitra, T. et al. Injecting drug use in Calcutta: a potent focus for an explosive HIV epidemic. Drug Alcohol Rev 16: 17, 1997.
22. Kumar, S. Rapid Situation Assessment on Injecting Drugs Use in Chennai, South India. Report of UNESCO, DAPPA and SHARAN, New Delhi, India, 2000.
23. Reid, G. Responding to the drug-using situation in Calcutta: embracing the holistic approach. National AIDS Bulletin, Australia, 2001.
24. Manning, G. An EU-UNESCO Rapid Assessment Study Report, 2001.
25. NEIDAC. High in the clouds: Rapid situation assessment on drug use in Meghalaya. In : National Survey of the Extent, Trend and Patterns of Drug Abuse in India. NEIDAC. Shillong, India, 2000.

26. Sathiamoorthy, K. Injecting Drug Use in India: Report on the Assessment done in Madras City. Research Report for YRG Centre for AIDS Research and Education, Madras, India, 1996.
27. Mudur, G. Abuse of OTC drugs rising in South Asia. BMJ 318: 556, 1999.
28. Jain, M.K., John, T.J. and Keusch, G.T. Epidemiology of HIV and AIDS in India. AIDS (Suppl 2) 8: 61, 1994.
29. Manning, G. Overview of Five Indian Cities. Presentation at National Dissemination Workshop on Rapid Situation Assessment of Injecting Drug Use in Indian Cities. SHRAN, New Delhi, 2001.
30. Panda, S. Rapid Situation Assessment: Opioid/Opiate Drug Use in Calcutta. Society for Applied Studies. Calcutta, India, 2000.
31. Tellis, E., Rodrigues, G., Marshall, M. and Rajkumar, R. Rapid Situation Assessment of Drug Use in Mumbai. Report for Sankalp Rehabilitation Trust. Mumbai, India, 2000.
32. Gokhale, N.A. Mizoram: In a Blue Vein. OUTLOOK. November 6: p.14, 2000.
33. MAP. The Status of HIV/AIDS/STI Epidemic in Asia and the Pacific. Monitoring the AIDS Pandemic Provisional Report, 2001.
34. Mehra, J. Impact of HIV/AIDS on Children in Manipur. UNICEF and Manipur State AIDS Control Society, India, 2000.
35. Drug Use and HIV Vulnerability: Policy Research Study in Asia. UNAIDS and UNDCP, Bangkok, 2000.
36. Dorabjee, J., Sarin, E., Singh, S., Deepak, V., Kole, S. et al. Rapid Situation Assessment of Drug Use in Delhi. Sharan - Society for Service to Urban Poverty, 2001.
37. Ray, R. South Asia: Drug Demand Reduction Report. UNDCP Regional Office for South Asia, New Delhi, India, 1998.
38. Ganguly, K. Opium use in Rajasthan India: A socio cultural perspective. In: Drug Use and Cultural Contexts Beyond the West. Eds. R. Coomber and N. South. Free Association Books, London, 2004.

This write-up has been contributed by Dr. K.K. Ganguly, Scientist E, Indian Council of Medical Research Headquarters, New Delhi.

ABSTRACTS

Research Projects Completed Recently

The impact of multidisciplinary intervention on the health related quality of life of ambulatory older subject

One hundred and fifty five geriatric patients attending the geriatric clinic of All India Institute of Medical Sciences, New Delhi were subjected to an intensive multidisciplinary intervention programme stretched over six months period. Most patients were living in the community in nuclear or extended families with spouse and children, fully or partially independent financially reflecting the existence of a care system. Though most subjects were suffering from various pathological states and complained of musculoskeletal pain and disability, they were largely functionally independent. The impact of the intervention was assessed in eighty four patients who completed the complete intervention, by changes in various measures of healthy, functional independence, instrumental activities of daily living, psychological

aspects of health and quality of life. There was significant improvement in various indicators of health such as functional independence, IADL, quality of life in the first three months which persisted at six months though the intensity of improvement stabilized. However, several parameters related to the socio-economic status and family structure did not change as the interventions were not supposed to address non-health issues. Loss of enthusiasm towards the end of study period, appearance of new health problems and non-compliance to non-pharmacological interventions probably led to loss of impact towards the end of the study.

A.B. Dey
Professor
Department of Medicine
All India Institute of Medical Sciences
New Delhi

Publications:

1 Kumar, N., Gupta, S., Singh, D.C., Gumber, S. and Dey, A.B. Development and standardization of an assessment scale for life satisfaction in elderly persons. Indian Ageing Congress 2004. Abstract: 23.

2 Kumar, N., Gupta, S., Gumber, S. and Dey, A.B. The impact of multidisciplinary intervention on the health related quality of life of ambulatory older subjects. Indian Ageing Congress 2004. Abstract: 28.

Pretreatment with thiopental for prevention of pain associated with propofol injection

Double blind randomized study was carried out on 90 adult ASA physical status I-II patients undergoing short gynaecological procedures to ascertain the efficacy of pretreatment with thiopental 0.5mg/kg and lidocaine 40mg after venous occlusion for prevention of propofol induced pain. The patients having communication problems and those with the history of allergies and known history of hypersensitivity to barbiturates and lipids were excluded from the study. The patients were randomly assigned into three groups of thirty each. Group I received normal saline, group II received lidocaine 2% (40mg) and group III received thiopental 0.5mg/kg respectively. All pretreatment drugs were made in 2ml and were accompanied by venous

occlusion for 1 minute. Propofol was administered after release of venous occlusion. Pain was assessed with a four point scale; 1= no pain; 2= mild pain; 3= moderate pain; 4= severe pain at the time of propofol injection. Thirty patients (100%) complained of pain during propofol injection in normal saline group as compared with five (20%) and seven (30.4%) in the lidocaine and thiopental group respectively (p.05). The study inferred that both the agents can be used effectively in clinical practice to alleviate pain associated with propofol injection. Though lidocaine has widespread application, the study proves that thiopental usage in the dose range of 0.5ml/kg is a equally better alternative to lidocaine with similar advantages. It was therefore suggested that routine pretreatment with both the agents along with venous occlusion for 1 minute can be used effectively in clinical practice for prevention of pain associated with propofol injection. This simple, readily available technique will eliminate the unpleasant side effects of pain, allow a more tolerable induction of anaesthesia and increase patient acceptance of propofol.

Ajay Kumar
T.V.S.P. Murthy
Department of Anaesthesia
Army Hospital (R&R)
Delhi Cantt.

ICMR NEWS

The following meetings of various technical groups/committees of the Council were held:

Meetings of Task Forces (TFs)/Expert Groups (EGs) held at New Delhi:

TF on Asthma	December 12, 2007
EG on Genomic Analysis of MHC Genes in Type 1 Diabetes in the Indian Population	December 20, 2007
TF on Genetic Basis of Resistance to Diabetes In Raica Community	December 20, 2007

TF on Jai Vigyan Mission Mode Project on Community Control of RF/RHD	January 18, 2008
TF on Urban Mental Health Problems and Their Service Needs	January 28, 2008
EG on Stem Cell Research	February 26, 2008
EG on Mental Health Service Needs and Service Delivery Models in Disaster (Earthquake) Affected Population in Gujarat	February 29, 2008

Meetings of Project Review Committees (PRCs) and Other Meetings held at New Delhi:

PRC on Oncology, and Pathology	December 27-28, 2007
PRC on Biomedical Engineering	January 21, 2008
PRC on Cardiovascular Diseases	February 4, 2008
PRC on Gastroenterology	February 8, 2008
PRC on North-East Projects	February 12, 2008
PRC on Traditional Medicine Research	February 12, 2008
PRC on Pharmacology	February 13, 2008
PRC on Urology	February 18, 2008
Indo-US meeting on Policy Issues for Road Traffic Accident Prevention and Control	February 26, 2008

Participation of ICMR Scientists in Scientific Events:

Dr. P. Dutta, Deputy Director and Dr. D.R. Bhattacharya, Sr. Research Officer, Regional Medical Research Centre (RMRC), Dibrugarh, participated in the International Conference on Malaria Control in the Mekong Region: Challenges and Opportunities at Hanoi (December 3-5, 2007).

Dr. Soumya Swaminathan, Deputy Director (Sr. Grade), Tuberculosis Research Centre (TRC), Chennai, participated in the XII meeting of the National TB Programme Managers at Dhaka (December 3-6, 2007). She also participated in the XV Conference on Rotaviruses and Opportunistic Infections at Boston (February 3-6, 2008).

Dr. S.S. Das, and Dr. R.K. Nandy, Senior Research Officers, National Institute of Cholera and Enteric Diseases (NICED), Kolkata, participated in the Joint Panel meeting of XLII United States-Japan Conference on Cholera and Other Bacterial Enteric Infections at Austin (December 5-7, 2007).

Dr. Sunita Saxena, Director, Institute of Pathology (IOP), New Delhi, participated in the meeting on Research Policy and Management of Risks in Life

Sciences Research for Global Health Security at Bangkok (December 10-12, 2007).

Dr. S.P. Tripathy, Deputy Director (Sr. Grade), Dr. R.R. Gangakhedkar, Deputy Director and Dr. Seema Sahay, Assistant Director, National AIDS Research Institute (NARI), Pune, participated in the Proposal Development Workshop and Communication Strategy meeting at London (December 10-14, 2007).

Dr. B. Dinesh, Assistant Director, National Institute of Nutrition (NIN), Hyderabad, participated in the WHO Regional meeting on the Role of Education in Rational Use of Medicine at Bangkok (December 12-14, 2007).

Dr. M.D. Gupte, Director, National Institute of Epidemiology (NIE), Chennai, participated in the TEPHINET Board of Directors Meeting at Atlanta (December 19-21, 2007). He also participated in the meeting on Capacity Building in FETP in Asia Sub-Region at Phuket. He and Dr. N.S. Wairagkar, Deputy Director, NIV, Pune and Dr. M.K. Bhattacharya, Assistant Director, NICED, Kolkata, participated in the IX Meeting of WHO Product Development Group for Measles Aerosol Vaccine at Geneva (January 24-25, January 29-30, 2008).

Dr. Neena Valecha, Deputy Director (Sr. Grade), National Institute of Malaria Research (NIMR), Delhi, participated in the World Antimalarial Resistance Network Meeting at Oxford (January 3-6, 2007).

Dr. S.K. Kar, Director, RMRC, Bhubaneswar, participated in the meeting on Resolving Critical Challenges in the GPELF at Geneva (January 9-10, 2008).

Dr. V. Kumaraswami, Deputy Director (Sr. Grade), TRC, Chennai, participated in the WHO meeting to Review the Impact of Mass Drug Administration on Disease Caused by Lymphatic Filariasis at Geneva (January 9-10, 2008).

Dr. G.B. Nair, Director and Dr. Dipika Sur, Deputy Director, NICED, Kolkata, participated in the Institutional Collaborative meeting between International Vaccine Institute (IVI) and NICED at Seoul (January 10-11, 2008).

Dr. P.R. Narayanan, Director, TRC, Chennai, participated in the Stop TB Partnership Task Force

Meeting at Geneva (January 15-16, 2008). He also participated in the Workshop meeting on the External Evaluation of the Stop TB Partnership Secretariat at London (February 7-8, 2008).

Dr. Abha Rani Agarwal, Deputy Director, National Institute of Medical Statistics (NIMS), New Delhi, participated in the VII Annual International Hawaii Conference at Honolulu (January 17-19, 2008).

Prof. Arvind Pandey, Director, NIMS, New Delhi, participated in the I Consultative meeting of the Regional Advisory Group on Improved Use of Strategic Information to Scale up HIV and AIDS Response in Asia and Pacific at Bangkok (January 21, 2008).

Dr. B.C. Das, Director, Institute of Cytology and Preventive Oncology, NOIDA, participated in the WHO meeting on Standardization of HPV Assay and the Role of HPV-Labnet in Supporting Vaccine Introduction at Geneva (January 23-25, 2008).

Dr. G.B. Nair, Director, Dr. T. Ramamurthy and Dr. Dipika Sur, Deputy Directors, Dr. N.S. Chatterjee, Assistant Director and Dr. Mamta Chawla Sarkar, Senior Research Officer, NICED, Kolkata, participated in Indo-Japan Symposium on Enteric Infections and Asian Forum on Infectious Diseases at Okayama and Osaka respectively (January 25-27 and 28-29, 2008 respectively).

Dr. S. Appalaraju Bagadi, Research Officer, IOP, New Delhi, participated in the Miami 2008 Winter Symposium on Regulatory RNAs in Biology and Human Health at Florida (February 2-6, 2008).

Dr. G.K. Medhi, Sr. Research Officer, RMRC, Dibrugarh, participated in the XV International Union Against Sexually Transmitted Infection and II Annual International Infectious Disease Congress at Dubai (February 3-5, 2008).

Dr. R.S. Paranjape, Director, NARI, Pune, participated in the Conference on Rotavirus and Opportunistic Infection-2008 at Boston (February 3-6, 2008).

Prof. A.P. Dash, Director, Dr. Neena Valecha, Deputy Director (Sr. Grade) and Dr. S.K. Ghosh, Deputy Director, NIMR, Delhi, participated in the meeting on

Result and Publication Strategy for the DHA-Piperaquine Phase III Trial in India at Bangkok (February 5, 2008).

Dr. A.C. Mishra, Director, NIV, Pune, participated in the WHO Consultation on the Composition of Influenza Vaccine for the Northern Hemisphere (February 11-14, 2008).

Dr. Alamelu Raja, Deputy Director (Sr. Grade), TRC, Chennai, participated in the EU-Project FASTEST-TB-Annual meeting at Braunschweig (February 28, 2008).

Training Programmes/Fellowships

Dr. Kanwar Narain, Assistant Director, RMRC, Dibrugarh availed JSPS Postdoctoral Fellowship for 59 days at Kochi Medical School, Japan (w.e.f. December 15, 2008).

Dr. S.D. Chitambar, Deputy Director, NIV, Pune, and Dr. Joseph K. David, Senior Research Officer, NIE, Chennai, underwent Advanced Training in Rotavirus Characterization Methods and to Genotype Untypable Strains from the Rotavirus Collection at CDC, Atlanta (January 13 - February 23, 2008).

Dr. Sulagna Basu, Research Officer, NICED, Kolkata, participated in Wellcome Trust Advanced Course on Genomics and Clinical Microbiology at Cambridge (January 27 - February 1, 2008).

Dr. Rajeswari Ramachandran, Deputy Director (Sr. Grade), participated in the International Tuberculosis Infection Control Training Course at Gaborone, Botswana (February 18-22, 2008).

Dr. Beena Joshi, Senior Research Officer, NIRRH, Mumbai, availed WHO 2008 Course in Reproductive Health Research for one month at Geneva (w.e.f. February 4, 2008).

Workshops

An ICMR- WHO Workshop on Implementation of Stroke Surveillance in India was organized at the ICMR Headquarters, New Delhi during December 6-7, 2007.

Statement about ownership and other particulars of the ICMR Research Information Bulletin as required under Rule 8 of the Registration of Newspapers (Central) Rules 1956.

Place of Publication : Indian Council of Medical Research
Ansari Nagar, New Delhi-110 029.

Periodicity of Publication : Monthly

Printer's Name : Shri J.N. Mathur

Nationality : Indian

Address : Press Manager
Indian Council of Medical Research,
Ansari Nagar, New Delhi-110 029.

Publisher's Name

Nationality : Same as above

Address

Editor's Name : Dr.K. Satyanarayana

Nationality : Indian

Address : Indian Council of Medical Research,
Ansari Nagar, New Delhi-110 029.

I, J.N. Mathur, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd/- J.N. Mathur
Publisher

EDITORIAL BOARD

Chairman

Dr. S.K. Bhattacharya
Addl. Director-General

Editor

Dr. K. Satyanarayana

Asstt. Editor

Dr. V.K. Srivastava

Members

Dr. Lalit Kant

Dr. Bela Shah

Dr. V. Muthuswamy