Changing Patterns in the Types and Methods of Abuse of Illegal Drugs in Sri Lanka: A Study Based on Five Recent Case Series

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Abstract

Substance abuse is a global problem. The types of drugs, patterns of abuse and other demographic characters change over time. Five incidences including two case series are discussed here. They involve teenagers and young adults including first-time users of cocktails of drugs including relatively newer substances of abuse in Sri Lanka such as amphetamines and methamphetamines. Illegal gatherings organized through the internet such as Facebook parties are becoming commoner in Sri Lanka providing a safe platform for experiencing illegal drugs and casual sex for teenagers including school children. Recreational abuse of these drugs in the dance culture by teenagers and young adults poses many medical, social and psychological problems. Young female substance abusers are on the rise. Chemsex or the abuse of psychoactive substances to enhance sexual desire, performance and to achieve a 'carefree and relaxed mind-set' during casual sex is a relatively newer entity in Sri Lanka which is reported in these case series. Rave parties, beach parties and Facebook parties pose many new challenges to the law enforcement, Government Analyst and the Judicial Medical Officer in Sri Lanka. Multi-disciplinary research and infrastructure development are necessary to successfully face these challenges.

Keywords: Facebook parties, substance abuse, chemsex, amphetamines, rehabilitation

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Introduction

Substance abuse refers to the harmful or hazardous use of psychoactive substances including alcohol and illicit drugs.[1] These substances have common similarities such as tolerance, physical dependence and psychological dependence even though they differ in biochemical structure.[2] Illicit drugs affect people without age, gender, social, cultural and ethnic discrimination. The use and abuse of psychoactive drugs is a practice found in human civilizations since ancient times. In the mid-twentieth century, bare house acid music parties ('Acid Parties') were common in the UK where Lysergic Acid Di-ethyl Amide (LSD) had been abused.[3] With changing social and cultural trends, patterns and types of illicit drug use too tend to change. As such, once well known 'Acid Parties' are almost never heard of these days and the transition had been towards the abuse of amphetamines and methamphetamines in the form of 'Ice Parties' since the late twentieth century.[3,4] Another challenge is the invention of designer drugs by introducing slight molecular modifications to the prototype drug.

These more potent substances may not be governed by the laws of the land and may also pose a challenge in detection and quantification in biological samples.[2]

The abuse of cannabis has a long history in Sri Lanka as it is a well-known medicinal ingredient used in indigenous and Ayurvedic practice. The Cannabis sativa plant grows well in the tropical climate of the island. Opium too was among the drugs of abuse for a long time as it is also used for certain Ayurvedic preparations. Heroin came into Sri Lankan underworld drug-market around the late 1970s to early 1980s. Smoking was the commonest method of abuse of cannabis and heroin.[5] Due to its geographical location, Sri Lanka is a common transit point in illegal drug trafficking across international sea boundaries. Even illicit drugs which are not yet a common problem in Sri Lanka such as cocaine may find their path to their destinations across Sri Lanka as a transit point.[6] To control and prevent this situation, in 1984, the parliament has enacted the National Dangerous

Drugs Control Board Act No. 11 of 1984 and established the National Dangerous Drugs Control Board [NDDCB] under the Ministry of Defense as part of a single convention made between United Nations and Sri Lanka.[6] The Board which is the principal authority in the formulation and review of the national policy regarding prevention and control of dangerous drugs and the treatment and rehabilitation of drug abusers came into operation on the 9th of April 1984.[5,6,7] A separate Presidential Task Force had been established recently as a way forward in controlling drug smuggling and trafficking. Even with these dramatic efforts to control drugs, usage of illegal drugs as well as use of Sri Lanka as a transit point in the international hardcore drug industry, had been dramatically increased in recent times.[5,6]

Types of drugs and patterns of abuse are changing in Sri Lanka. From cannabis, opium and heroin, users are shifting towards different forms of amphetamines, methamphetamines, designer forms of opioids and occasionally cocaine in recent times. This trend had been witnessed in the developed world about two decades ago.[3,4] The assistance of modern electronic social media and other forms of electronic communication is sought to organize recreational activities such as Facebook parties, music parties, beach parties, dance parties, rave/dating parties etc. in discreet locations such as private residences or hired motels, where free access to newer forms of illegal drugs is common among many other illegal and socially and culturally unacceptable events without the knowledge and access of the law enforcement. Once the party is over, a trace could not be found of the organizers as the web page or the blog is permanently erased.[1,5,6,7]

Case report

This article elaborates on several instances associated with illicit drug abuse and the practical difficulties the medico-legal specialists face in handling such situations. All examinees were subjected to medico-legal examination after obtaining the written informed consent. This article is written in a manner that the individual identity of the examinees could not be traced through the material contained in the article.

Incident 01

A 15-year-old schoolgirl was recovered from a suicidal attempt of injecting Brazo® (a commercial preparation of strong mineral acids used for polishing brass instruments) into cubital fossa following an argument with her parents when the parents made restrictions to her social behaviour

after they got to know that she is addicted to illicit drugs and that she maintains casual relationships with boys for fun. One of her friends, another girl of the same age sustained a fracture after a fall from a height in suicidal intention when her parents inquired from her regarding her drug-seeking behaviour. Four more girls from the same group threatened their parents that they too will jump off a high-rise building if the parents attempt to restrain their social behaviour. All six were taking illicit drugs and dating boys during school hours. With the involvement of the medico-legal system, all of them were successfully rehabilitated and were kept under constant surveillance with the help of the probation service, with no interruption to their school education.

Incident 02

A twelve-year-old parentless boy from sub-optimal socio-economic backgrounds was produced for medico-legal examination following an attempt of sexual assault upon an eight-year-old girl. He also had been suspected of several petty crimes and robberies. He was not schooling and was living with his drug-addicted grandmother. The boy too was addicted to illicit drugs. The guardianship was shifted and the child was sent to a rehabilitation centre under the supervision of the probation service.

Incident 03

A 19-year-old boy who came to Colombo for higher studies from a remote rural area of the country was found dead on the beach in the morning after a 'beach-party' with multiple superficial injuries. The party had been organized through facebook and the organizers were not to be traced. The corresponding internet page had been deleted. Toxicological analysis of post-mortem blood and urine revealed multi-drug abuse including heroin, cannabis, amphetamines and ethyl alcohol.

Incident 04

Hundred and thirteen (113) suspects were produced for medico-legal examination for illicit drug use, from an illegally organized 'Facebook' party held in a private residence taken for one night's hire. 27 of them were girls. 09 participants were below the age of 18 years. The majority were young adults below 24 years. 18 were still schooling while 42 have just finished their Advanced Level examination. Among the suspects were four women of the 35 to 45-year age range who admitted (upon questioning) that they were invited by the organizers free of charge to provide sexual services. They also admitted that though they are not commercial sex workers in the sense of 'street prostitutes', they have been participating in beach parties and Facebook parties of this nature for the last two years. 38 were positive for Methylene deoxy Methamphetamine and

Methamphetamine. Varying numbers were positive for alcohol, cannabis and heroin either in combination or alone. 93 claimed that it was their first experience of attending a party of this nature while the remaining 20 admitted that they are used to attend such parties for casual sex, drugs and fun.

Incident 05

Seventy eight (78) suspects were produced by the police under circumstances similar to the incident no. 04 but from a different location around one month after the incident no. 04. The party was organized via social media in a covered-up playground in a relatively less populated area in the Colombo suburbs. 11 were less than 18 years and 22 were females. The majority were below 24 years. Most were positive for Methylene deoxy Methamphetamine and Methamphetamine. Majority were positive for ethyl alcohol. A minority of 13 were positive for cannabis and opioids. Some claimed that they also had used 'Gaba'/'Taba' (street name for Pregabalin). Upon questioning two middle-aged females and one young adult male (crossdresser) admitted that they were commercial sex workers. Two young females were pregnant and four others had evidence of sexually transmissible infections. They claimed that they were not aware of their state of pregnancy and STIs at the time of examination.

Discussion

All these cases were examined in a single tertiary care centre within a one-year duration. Several such similar instances had been reported from elsewhere within Colombo and other major cities of the island and had been managed by the Consultant Judicial Medical Officers of the respective centres and/or the University Forensic Units. This reflects a new horizon in the field of substance abuse in Sri Lanka. This increasing tendency of substance abuse by the younger age groups was already highlighted in the Statistical Analysis Annual Report of 2018 and 2019 released by the National Dangerous Drugs Control Board of Sri Lanka.[6] True incidence may be higher than reported. Under reporting is common due to difficulties in tracing such discreet parties, maintenance of professional secrecy by health care workers, lack of uniformity in data analysis, practical difficulties in qualitative and quantitative chemical analysis of substances and the legal barriers faced by the law enforcement etc.

Fear of social stigmatization as well as the cultural, religious and ethnic background, prevents the users from coming forward to divulge correct information regarding their drug habits.[1,4,5,6] Therefore, the use of illicit drugs represents an iceberg phenomenon. The case series mentioned above highlight the increasing trend to use more expensive and newer forms of drugs such as Ice, Ecstasy and

occasionally cocaine together with long-standing illegal drugs such as cannabis and heroin which were prevalent in Sri Lanka for many decades.[5,6,7] The national statistics further show that the usage of illicit drugs had been doubled within a period of five years from 2013 to 2018.[5,6] The drug-using population consists of all age groups, both genders and individuals from all ethnic, religious, cultural and social strata.[5,6] Geographically, the highest incidences are reported from Colombo, Gampaha and Kurunegala districts.[5,6,7,8,9] An increasing trend of drug abuse among teenagers, young adults and especially adolescent females had been spotted in the comparative national statistics, which tallies quite well with the twenty-year experience of the authors.[2,9,10] This is very well compatible with the findings of the two case series mentioned above as incident 04 and incident 05.

The so-called 'Club Drugs' (used in rave/dance/music/beach/Face-book/ware-house parties) and 'Date Rape Drugs' are increasingly becoming popular among older adolescents (students), young adults and females in the South East Asian region and they commonly include Ice, Ecstasy, LSD, ADAM, EVE, Majun, Bhang, Subjee, Speedball, Liquid lady, Coke, Snow, Cadillac, Gold dust and Green gold [2,6,10,11]. These drugs are not pure forms of single drugs but usually consist of varying combinations of unknown strengths of drugs such as cannabis, heroin, amphetamines, methamphetamines, cocaine, benzodiazepines, LSD and newer generation psychogenic and psychomimetic drugs; all of which are often mixed with adulterants/diluents/excipients.[2,3,4,6] This 'cocktailing' poses serious health effects to the user as well as problems in the detection, quantification and treatment.

Illicit drugs may be administered in different ways. 2018 data obtained at the time of admission to rehabilitation centres show the common methods as in the form of 'eat and drink', smoking, sniffing, injection, 'Chinese method', and 'other routes' in the overlapping percentages of 47%, 73.4%, 2%, 3%, 63% and 2.4% respectively.[5,6,7,8] These figures are overlapping as one abuser tend to use several methods of administration depending on the type of drugs he abuses and the occasion. Most of the new generation drugs are administrated through sublingual, buccal and oral routes because they are easily available as stamps, patches, blotting papers, tablets, capsules, powders, solutions, gelatin sticks and sugar cubes which are easily transferred and sold in night parties and dances within the time of flashlight without the notice of law enforcement authorities even when the event had been organized with proper license. Most of the time, the firsttime users or experimenters start their first experience

during the adolescent or young adult period.[1,6,9] This is also observed in our case series.

The complications are more in adolescents, young adults and females.[1,9,10,11] Growth and development of adolescents may be adversely affected by the use of certain drugs especially opioids, due to their effects on the hypothalamo-pituitary growth and ovarian axes in the maturing individuals.[6,7] Augmentation of gonadotropins during deep sleep, during early teenage periods may be impaired by the interference of stage iv sleep by stimulants such as cocaine and amphetamines.[10,11] These stimulants are now becoming popular among Sri-Lankan teenagers, students, dancers, stage artists and sportsmen.[6,7,9] Pubertal growth spurt and peak may be interfered with by depletion of protein (necessary for muscle and skeletal build) for calorie requirement especially in young abusers of alcohol-containing drug cocktails.[10,11] Adolescent females may experience secondary amenorrhoea and menstrual irregularities even in the absence of weight loss.[10,11] This has also been observed in our case series.

Some teenage females were not aware of their pregnancy status until it had been found out during gynaecological referral following medico-legal examination in our case series. Some could not even remember them being engaged in sexual activity. This may well be due to amnesia following administration of 'date rape' drugs and confusion, disorientation, impairment of judgment, the elevation of mood and aphrodisiac properties of drug cocktails[2,10,11] Sweetmeat prepared from bhang (majun, subjee) and some beverages of cocktails with stimulants are known to show above effects.[2,10] Willful intoxication with these drugs or administration by a third party with or without the knowledge of the recipient in rave-parties is considered as one contributory factor for sexual crimes including rape and unnatural sexual offences as well as unprotected sexual intercourse leading to sexually transmissible infections, unwanted pregnancies, teenage pregnancies, illegal abortions and even maternal deaths and other complications of teenage pregnancies.[2,6,7,11] State of mind caused by drugs may also contribute to failure to take precautionary measures following the episode, such as failure to take post-coital contraception and post-exposure prophylaxis for HIV etc. Increased metabolism of hormonal contraceptive preparations (OCP) due to elevated liver enzymes following continued abuse of alcohol and drug cocktails may lead to contraceptive failure making precautionary measures futile.[2,10,11]

'Relaxed state of mind' and heightened sexual desire caused by some drugs at rave parties will reduce

social inhibitions and remove the conscience about morality and social taboos, making the person more vulnerable to have unsafe sex, adventurous sexual practices, engage in casual sexual intercourse with multiple partners etc. Some may especially take cocktails of stimulant drugs in rave parties with the sole intention of increasing their sexual desires (and performance) while achieving a 'relaxed and high' state of mind during hours of ongoing sex. This relatively new (to Sri Lanka) phenomenon is termed 'chemsex' which is not a new practice among the gay populations of the Western world. There are reported cases that young men whose sexual orientation is generally heterosexual have claimed that they have felt intense pleasure when they have engaged in sex with other men after self-administration of speed (MDMA/ Methamphetamine).[13,14,15] Unlike in the last two decades of the last century, more recently chemsex has been associated with new psychoactive drugs and sex enhancers such as, γ -hydroxybutyric acid (GHB), mephedrone, methamphetamine (crystal methamphetamine or Crystal Meth), erectile dysfunction agents and alkyl and amyl nitrites ('poppers').[16,17] The 'chemsex' property of drugs may convert teenagers and young adults to engage in unsafe and risky homosexual activities making them more vulnerable to contracting blood-borne infections and STIs.[13,14] Some young adult males claimed that they felt intense orgasm-like feeling even without ejaculation. They also said that this feeling stimulates them to engage in continued sexual activity due to the difficulty in ejaculation. The male physiological sexual response comes to end with ejaculation and the male goes into a transient refractory period of varying lengths before the next arousal.[2,10,13] This may be the reason why teenagers, young adults and commercial sex workers (hustlers) tend to abuse such drugs continuously with the intention of evading and/or modifying this physiological response.[13,14]

The abuse of alcohol and drugs may adversely affect the foetus. Foetal alcohol syndrome with congenital foetal malformations, early abortions, abruptio placentii, intra-uterine deaths, pre-term deliveries, low birth weight and cognitive impairment of the newborn etc. are all well documented in the medical literature among alcohol and stimulant (especially cocaine and amphetamine) abusing and tobacco smoking young females.[10,11,12] This type of pregnancy is not an indication for legal/therapeutic abortions in Sri Lanka and therefore may end-up as illegal abortions which are difficult to be captured in formal statistics.[1] Further, a doctor may be confronted with serious ethical dilemmas when the doctor advises the expectant mother to quit alcohol, smoking and abuse of drugs for the benefit of the foetus and when she does not comply with the compromise of foetal well-being.[10,12]

Physiological addiction to narcotics is common in most infants of actively addicted mothers as opioids cross the placenta. Withdrawal may be manifested even before birth by increased activity of the foetus when the mother feels an urge for the drug or withdrawal symptoms develop in the mother.[12] Withdrawal symptoms are most commonly associated with heroin and methadone though they may also occur with alcohol, nicotine, phenobarbital, codeine, propoxyphene, amphetamines, neuroleptics, antidepressants and benzodiazepines.[10,12] Post-natal care will be poor among addicted parents, leading to physical and emotional mal-development of the child, child abuse and increased proneness of the child to abuse drugs.

It has been estimated that almost 2% of drug abusers in Sri Lanka use IV routes.[5,6,7] This can cause sudden death by cardiac and respiratory depression or hypersensitivity, bacterial endocarditis, bacterial meningitis, pneumonia and tuberculosis in consequence of direct and indirect outcomes of this practice [2,8,9]. These types of deaths are rare in Sri Lanka due to the low prevalence of intravenous usage.[6,7]

The young adult male described in the incident no. 03 in this case series, had consumed a mixture of drugs including alcohol, heroin, cannabis and amphetamines. As IV or IM routes were unable to be detected at the autopsy, it is most likely that he had taken those drugs orally and by smoking/chasing the dragon. He had minor superficial non-fatal injuries which could be attributed to violent and traumatic behavior following drugs.[2,11] Literature highlighting violent homicidal, accidental and suicidal behaviors of young drug abusers due to immature limbic system and connecting pathways of their brain is abundant.[10,11] They are more susceptible to drug-seeking behaviours due to the so called 'pleasure seeking behavior' of the young immature brains compared with the mature adult brains.[2,10] This indirectly encourages them to indulge in robbery, house breaking, burglary, prostitution and unnatural sexual behaviors including sodomy.[6,10,11] This could pose challenges in the control of HIV, Hep. B and C. Though Sri Lanka is considered as a low HIV prevalent country, new cases have been reported from within Colombo and its immediate suburbs among young adults.[1,5,6,7] The careful examination followed by post-mortem sampling excluded anal intercourse upon the deceased young male in the incident no. 03.

CNS stimulants such as Speed (Amphetamine), during the initial period of rising levels of the drug, leading to elation, cheerfulness, laughter, friendliness and a tendency to ignore other things and become more energetic.[2,10] Therefore, the

abuser tends to engage in dancing or physical activity without care of the body, rest, sleep, food or water. The teenagers and young adults who claimed that they have consumed illicit drugs said that they felt an intense feeling of pleasurable sensation within twenty minutes of administration by the mouth. This commonly occurs within five minutes of IV administration in high doses and is colloquially termed 'Rush' or 'Flash' by the drug users.[2,10] But when drug concentrations fall in blood, they start to feel the reverse of the above pleasurable sensations.[10] Continuous physical activity without self-care causes dehydration, electrolyte imbalances, hypoglycaemia, hyperthermia and rhabdomyolysis leading to myoglobinuria and hyperkalemia which could lead to acute renal failure and cardiac arrest respectively.[2,10] In the case series under discussion, young adults in the incident no. 4 and 5, were in a state of depression and they were dehydrated, tired, restless, hungry and thirsty while some were nodding in sleepiness. More severe and life-threatening conditions were not detected in our case series probably because the parties were raided around mid-night, just a few hours after the commencement.

Continuous use of stimulants in high doses leads to fatigue, exhaustion, paranoid psychosis, confusion, severe depression and sometimes unpredictable violent behavior causing accidents and homicides.[2,10,11] They will sleep for several days continuously and subsequently eat large amounts to satisfy their hunger. They may even go into severe depression with suicidal behavior. Using methamphetamine many times over a period of several days, usually without food or sleep, is often termed 'run'. [2,10] To overcome these issues, they may go for 'speed bingeing' or using drug cocktails or they may again start to crave drugs at any cost due to the physical and psychological dependence of the chemical.

A 'rush' of dopamine release in the brain due to methamphetamine abuse leads to the intense 'high' and continued reuse of the drug which may lead to addiction.[2,10] Methamphetamine also increases the levels of serotonin (5-HT) and norepinephrine, which are also brain chemicals. Methamphetamine can easily cross into the brain. Methamphetamine is able to penetrate the central nervous system more readily than amphetamine, making it a more potent and longer-lasting stimulant.[10] This property of the newer drugs urges the youngsters with immature brains to get the drugs at any cost without fear of the legal system and encourages them to involve in serious crimes even when they know that they are contrary to the law. DSM recognizes this as 'substance use disorders'.

Drug abuse, therefore, is a complicated issue that cannot be controlled by strict legal regulations alone. As it is a neuro-chemical response in its larger picture, it needs a non-punitive, empathetic and multi-disciplinary approach with the intention of treatment and rehabilitation than sending it to jail as already highlighted.[1] Well organized local researches are scanty in Sri Lanka.[9,1,2] The examinees are reluctant to divulge accurate details regarding the types of drugs, their doses, duration and method of abuse, available places, source of income and effects of drugs etc. This also highlights the need for new researches based on illegal drug abuse in Sri Lanka so that it helps in the formulation of more effective National Guidelines in the management and rehabilitation of illicit drug users.

There are several overall drawbacks to the existing system experienced by JMOs and the police. Technological assistance is not strong enough to locate and raid unlawful gatherings organized via the internet. The legal framework is not comprehensive and straight-forward enough to raid, apprehend, detain and prosecute such gatherings even though drug dealings and prostitution take place in such places. For example, in the 5th case series, even though the actual number apprehended was over some 150, only 78 of them were able to be subject to medico-legal examination as the rest were bailed out and taken home by their parents while the examination was going on. When the numbers are high, the human resources both in the police as well as the office of the JMO may run out. For example, the assistance of both the University Forensic Unit and the JMO's office was sought in handling incidents no. 4 and 5. The drug testing in these situations is a challenge. The resources in the Government Analyst's Department may run out. It is a commendable recent development that most Forensic Units in the country use rapid multi-drug test kits of international standards. Yet, one test kit costs around 1500-2000 LKR and it is a considerable cost when it comes to hundreds of suspects at a given time. Therefore, further infra-structure development in the context of human, material and technological resources has to be achieved to keep abreast with the emerging challenges in the illegal drug industry.

Conclusions

These case series represent a profile of the rapidly changing trends of drug abuse and its complications among the Sri Lankan youth even though most of such instances are under-reported representing an iceberg phenomenon. Treatment and rehabilitation may be interfered with, by the punitive approach of the legal system due to fear and reluctance to give accurate information regarding abuse and lack of cooperation. Well organized multi-centered researches covering all aspects of the complex problem of drug abuse is a need of the day.

Technological assistance and infra-structure development in the police, judicial medical and government analyst sectors are a felt need for better handling of the emerging challenges.

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