

A LIFE OF SPICE- LEGAL HIGHS

Richard Barraclough QC, Six Pump Court

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“Just take a pinch of Insane Joker Herbal incense and place it on your favourite incense burner and allow the enticing and relaxing aroma to envelop the room”

“The potential dangers are that if someone has any type of mental health problem such as depression or anxiety these drugs change their mood and how they view the world” (DRUGSCOPE)

TWO MURDERS

The so called legal high “Spice” has played a role in a number of recent murders.

In the first a young man (B) who, despite a troubled background at the age of 5 years was described as a vivacious, happy and bright young boy. At the end of the trial after he had been convicted of murder he became so violent that some six prison officers were unable to control him and as he attacked his co-defendant, also convicted of murder, managed to break the jaw of one officer and traumatise another.

He and his Russian girlfriend who was not the co-defendant had become addicted to Spice. Her addiction was such that after his arrest for murder she walked into the local town hall believing it to be the Russian embassy, remonstrated with the staff, kissed one guard and then accused her boyfriend of being a spy. They bought their Spice quite openly from a corner shop in the town.

His reaction to Spice was to engage in irrational, indiscriminate and uncontrolled violence.

His girlfriend befriended a vulnerable older man whilst B was in prison for an unrelated matter. He was released from prison and also became a friend of the man.

Months later that man was dead. He lay lifeless, neatly covered in bed as if asleep for a number of weeks as his body putrefied. His wrist was tied as if restrained or as if he had been part of some ritual.

He had been stabbed in the face and body. Cause of death could not be ascertained but he had plainly been murdered.

The co-defendant had been living with the body during those weeks as it rotted.

Neither she nor B knew one another. They had met perhaps once.

The problem is that because of B’s addiction to Spice it is plain that he might act irrationally and so he met the co-defendant one day after he had rowed with his girlfriend and as the jury found, both murdered the deceased.

RICHARD BARRACLOUGH QC defended B.

In the second case, three brothers became addicted to Spice. They also obtained their Spice from a corner shop. One evening for no good reason they decided to torment the vulnerable middle aged woman who had given their family shelter. They, all three subjected her to wrestling moves and

throws over a period of six hours so that almost every bone in her body was broken. She survived for a time. She was spoken to by the Police and told them that it had started as a game.

They all pleaded guilty to a charge of Section 18 causing grievous harm with intent. She then died and they were charged with murder. Their plea to the Section 18 offence was used as evidence of intent. The judge refused to allow them to vacate their plea and they were convicted of murder.

RICHARD BARRACLOUGH QC defended one of the brothers K.

K's mother reported that the effect of the legal high Insane Joker was to turn her sons into "monsters"; that they became "wild and out of control".

Psychological evidence was called. The defendant K reported that he did not realise what was happening, that they were smoking spice and "being stupid". His full scale IQ fell within the extremely low range of intellectual functioning. He had a reading age of 9 year and 8 months. He fell within the autistic spectrum. He found it difficult to think adaptively, quickly or flexibly. The psychologist reported "There must be concerns that K's consumption of Spice would have further impaired his ability to form a rational judgment and exercise self-control at the time of the killing".

A psychiatrist reported that "Legal highs, research chemicals and designer drugs are synonymous terms. These compounds are chemical synthesised substances which provide an effect similar to illegal drugs such as cannabis, cocaine and other drugs. Often they are sold as not suitable for human consumption but as incense and other terms to get round legislation. There is increasing concern as to their safety and places such as prison are seeing a mounting number of cases where they are seen to significantly affect mental and physical health, even causing fatalities. They are often potent psychoactive agents. K told me that he was using Insane Joker which seems to be a blend of synthetic drugs put on herbal matter and then burnt and inhaled/smoked. It is difficult to be confident around what effect it had on him".

A toxicologist reported:

"It is believed that the psychoactive compound that may have been present in the "Legal High" product "Insane Joker" has been identified by forensic analysisas the compound described as MDMA-CHMICA"....The compound is described...as being a "Third Generation Legal High" and is believed to be likely to be (as a result of the very low blood concentrations encountered and also the severity of the adverse side effects) possibly the most active and powerful "synthetic cannabis Agonist" (variant) yet encountered in the illegal drugs market...This so called "Spice" compound has caused a recent reported very marked incidence of an unusual rate of occurrence of sudden unexpected death and also massive hospitalisation of intoxicated individuals who have smoked even small amounts of this substance across Russia and also Europe.....it should be noted that the occurrence of severe side effects has been reported to be more likely to occur in individuals suffering from pre-existing psychological challenge....Of some potential significant concern is the observation that "Spice" type components have been described as being capable of dangerously altering moods and changing an individual's perception of the world, with those who suffer from mental problems being particularly at risk....Unusually it has been noted that such adverse side effects (which are thought also to have included sudden death in some susceptible individuals) may have been the result of likely very small possibly microgram (millionth of a gram) dosages which have resulted in often very low Nano gram per ml concentrations of the drug in the blood"

In both these cases the defendants could remember nothing about what they had done at any particular time. One of the reported effects of the use of synthetic cannabinoids is the severe impairment of short term memory.

LEGAL HIGHS

Synthetic cannabinoids describe the growing number of manmade mind altering chemicals which are either sprayed on dried shredded plant material so that they can be smoked or sold as liquids so as to be vaporized and inhaled in e cigarettes or other devices. They are cannabinoids because they are related to chemicals found in the Marijuana plant. Whilst they may be called synthetic Marijuana they may affect the brain more than does Marijuana and the effects can be unpredictable and severe.

Synthetic cannabinoids mimic the effect of tetrahydrocannabinol (THC) which is the substance primarily responsible for the major psychoactive effects of Cannabis, the mind altering ingredient in Marijuana.

The synthetic cannabinoids act on the same brain cell receptors as delta-9-tetrahydrocannabinol (THC), Researchers know that some of the synthetic cannabinoids bind more strongly to the cell receptors affected by THC and may produce stronger effects. This may explain why the effects of synthetic cannabis can seem both similar to and/or markedly different from and much more “trippy” and powerful than natural cannabis.

They may be labelled “*not fit for human consumption*”; they may claim that they contain “*natural material*” but the only part of the product which is “*natural*” is the dried plant on which the compound may be sprayed.

DEVELOPMENT OF LEGAL HIGHS

The compounds are made in laboratories. They are a group of drugs labelled “*new psychoactive substances*”. They are frequently sold in colourful packages or containers. They have a variety of names, K2, Spice, Joker, Back Mamba, Kush, and Kronic. They have no medical benefit.

The substances appear to have been stolen from legitimate medicinal and therapeutic inventions e.g. Indazole derivative which relates to compounds, pharmaceutical compositions and methods for the treatment of a condition mediated by CB1 receptor activity in humans and other mammals. They have cannabinoid (CB1) receptor binding activity and are directed to a method of treating a CB1 mediated disorder including pain, arthritis and osteoarthritis.

Many such cannabinoids have been detected in substances developed by scientists researching into how cannabinoids affect the body and how they might be used for therapeutic and medicinal purposes e.g. neurodegenerative disease, pain and cancer.

In the mid-2000s there were rumours of herbal smoking mixtures which were being sold as “*legal highs*” which might produce strong cannabis like effects. In 2008 investigators in Austria and Germany detected the synthetic cannabinoid JWH-018 in the product called “*Spice*”. Cannabinoids were later discovered in room or incense odorisers e.g. Gold Spice, Spice Silver and Yucatan Fire.

“Legal high products containing synthetic cannabinoids have been sold as herbal smoking mixtures since the mid-2000s. These products do not contain cannabis but when smoked produce similar

effects. They have been subject to innovative marketing approaches and are widely and openly available on the web and in some countries in bricks and mortar (“smart” shops)”

From one synthetic cannabinoid being detected in 2008, the number has grown to 25 in 2015, a total of 160 synthetic cannabinoids being detected up to December 2015.

MDMB-CHMICA is a synthetic cannabinoid receptor agonist (SCRA). It was first notified to the European Early Warning System after it had been identified in Hungary in September 2014 following a seizure of 0.19g of a green/brown herbal product. It is associated with a number of fatalities in Europe as well as non-fatal intoxications associated with loss of consciousness. It is structurally related to MDMB-FUBINACA. It was distributed under various names including one implicated in one of the murder trials, Insane Joker.

Methiopropamine (MPA) was first synthesized in 1942. It is a thiophene ring analogue of the controlled Class A substance Methamphetamine. Its effects are different to Methamphetamine. In 2010 MPA appeared on line as an uncontrolled legal stimulant with internet forums describing it as accompanied with mild euphoric effects. By 2014 the government issued a temporary class drugs order on MPA. Samples identified as containing MPA came in the form of powder, capsule and tablet. It was sold in branded products labelled not fit for human consumption but were sold for psychoactive effect. There was any number of names, B3, Banshee Dust, Madcat, Purple Bomb, Pink Panther, Dizzle Dust, Dust til Dawn, Black Cats.

THE ADAPTABILITY OF THE PRODUCT

The number of synthetic cannabinoids and their chemical diversity and the speed of their development make this type of substance difficult to detect and deal with. All the developers seek to do is to mimic the effect of THC. Thus as one kind of synthetic cannabinoid is detected and controlled so the developers are able to develop a different substance.

Thus it is easy to change the chemical formula of the substances so as to avoid the law.

They are consumed as powder, tablet, plant matter, crystalline, solid, capsule, blotting paper, liquid and granules. They are consumed by smoking, orally, snorting, sniffing and intravenously.

In 2012 the UK based company “Mary Joy UK” sold a potent brand of synthetic cannabinoid smoking mixture called “Annihilation” which became associated with numerous hospitalisations and user alerts. It contained the synthetic cannabinoids MAM-2201 and UR-144. Both these compounds were banned by the amendment to the Misuse of Drugs Act introduced on 26/2/13. The amendment banned all the popular synthetic cannabinoids in the UK market at the time. Within days the shops were restocked with scores of different brands containing one or more of four synthetic cannabinoids missed by the legislation 5F-AKB48, AKB-48, 5F-PB22 and STS-135. There is little information on the action on the brain of these compounds. It is reported that 5F-AKB48 has a strong binding affinity for the peripheral CB2 cannabinoid receptor with the effects thought to be significantly more potent than that of AKB48. 5F-PB22 is reportedly a full agonist of CB1 and CB2 with a higher binding affinity to CB2.

Synthetic cannabinoids represent the largest group of substances currently being monitored in Europe by the European Centre for Drugs and Drug Addiction through the early warning system.

A number of synthetic cannabinoids are manufactured outside the UK and shipped in bulk powder by mail and courier companies. One Korean study recorded purity value of 75% and 90% for bulk powder samples. Once in Europe the product for sale is put together. Certain herbs are used as a plant base for smoking mixtures. The synthetic cannabinoid is then sprayed onto or mixed with the plant material often using solvents to dissolve the powders and the ingredients are then mixed. The material is then dried and packaged. Because of the potency of the synthetic cannabinoid the amount of powder needed for each packet can be but a few tens of milligrams.

USE OF THE PRODUCT

The prevalence of use is variable. In 2014 US Monitoring the Future survey of students suggested a decline in use amongst 17-18 year olds from 11.3% (2012), to 7.9% (2013) and 5.8% (2014). The household surveys in England and Wales United Kingdom reported lifetime prevalence levels for adults 16 to 64 at 0.2% (2010/11) and 0.1% (2011/12). In the crime survey for 2104/15 a total of 0.9% of adults 16 to 59 had used new psychoactive substances in the last year of which 61% had used some herbal smoking mixture. There are similar surveys in Spain, France and Germany. A number of studies among clubbers, internet users identified higher levels of synthetic use than among the general population.

EFFECTS OF THE PRODUCT

Little is known about the long term effect of the substances. Some may have half-lives which may lead to prolonged psychoactive effect which may go beyond the usual effect of cannabinoids.

It is reported that tolerance to synthetic cannabinoids develops quickly with increasing dosage and compulsive use. They are addictive. It is not thought that they produce physical dependence but like natural cannabis some people may become anxious about stopping and may experience withdrawal symptoms such as sweating, insomnia, headaches, anxiety, depression and irritability and vivid dreams. It is reported that such symptoms generally subside within 7 to 14 days. .

It is clear that whatever we might think is known about synthetic cannabinoids, the reality is that these “*legal highs*”, intended to mimic the effect of controlled drugs are potentially full of risk.

They are responsible for severe poisonings and death.

The potential for toxic effects is very high in the use of these substances. The risks are increased by reason of the manufacturing process itself, which create an uneven distribution of substances within the plant material. Thus some products have “*hot pockets*” where the cannabinoid is highly concentrated with consequent risk.

Some adverse effects may be due to interference with the physiological functions in the body.

Reported effects are agitation, anxiety, confusion, paranoia with extreme and unreasonable distrust of others, nausea, racing heartbeat, stroke, heart attack, breakdown of muscle tissue, kidney damage, vomiting, intense hallucinations with sensations and images that seem real when they are not and psychosis with delusional and disordered thinking detached from reality, suicidal thoughts and other harmful thoughts and/or actions, increased confidence and energy and memory loss.

One consumer describe his “trip” in the following terms “*All of a sudden bam sicker punch to the face. I am delirious. I then got extremely sick trying to vomit...Then I felt like I was in a video game like I had this urge to complete a mission of some sort but could not figure out what I was supposed to do....(His mother arrived and) ..her face was distorted in a way you can't understand... (He was taken to hospital)...I am tripping now seeing patterns and colours as I close my eyes; eyes are rolling*

in my head, blacking in and out, heart beat monitor screeching off since its 160 beats per minute, talking like an idiot...(He was discharged)...I went home and slept it off. I woke up still stoned and it lasted for about 15 hours total...”

Different brands of synthetic material can have profoundly different effects. There are reported differences in the subjective effect of various synthetic cannabinoid compounds but the potency of any brand appears to owe more to the ratio of inert plant material to chemical compounds in the mix rather than any differences in the compounds themselves.

There are reports of mass poisonings in the United States and Russia. In 2014 one cannabinoid MDMB- FUBINACA was associated with the poisoning of 600 people and 15 deaths within a period of two weeks. In the United States in 2015 a major poisoning was linked with ADB-FUBINACA. In Poland some 200 hospital emergencies were reported and linked with “*Mocarz*”. The Louisiana Department of Health and the State Police banned new synthetic marijuana compounds called PX1, PX2 and MDMB-CHMICA in 2015. Designer drugs called Blue Diamond and Mojo had been linked with deaths and hospitalisations in Louisiana hospitals. The addition of compounds to the schedule of controlled dangerous substances is done through a partnership of the Police, department of health, the Poison Control Centre, hospitals, crime labs and parish coroners’ offices. The state health officer Dr Guidry is quoted as saying “*Drug makers change the compounds in these drugs as soon as we ban them, so the versions sold in retail stores are not necessarily safe and could be banned in the future*”.

On 8/2/16 EMCDDA issued an alert warning of 36 serious adverse effects – 13 deaths and 23 non-fatal intoxications , in Europe associated with the synthetic cannabinoid MDMB-CHMICA between September 2014 and July 2015. The deaths occurred in Germany, Hungary, Norway and Sweden. It was reported that since September 2014 more than 1200 seizures totalling approximately 50Kg had been made in Europe. The largest seizure was made by Customs at Luxembourg airport in December 2014 when 40 k of white powder was seized in transit from Shanghai to Madrid. The notice refers to the analysis of MDMB-CHMICA sold on the German market having visible small lumps of the substance in the plant material suggesting the presence of “*pockets*” where the substance may be highly concentrate. In the UK products containing the compound are found in Black Mamba, Sweet Leaf Obliteration, Stay High, and Vertex Pirate Edition.

PSYCHOACTIVE SUBSTANCES ACT 2016

The Act concerns substances which are capable of producing a psychoactive effect in a person. Such an effect is the stimulating or depressing of a person’s central nervous system and thus affecting the persons mental functioning or emotional state. A person consumes such a substance if he causes or allows the substance or fumes to enter the body in any way. It is an offence intentionally to produce such a substance for his own or another’s consumption for its psychoactive effect or to supply or offer to supply any such substance in the circumstances set out in the Act. The offence is aggravated when it concerns couriers, school premises or prisons. Thus the shops which trade in Legal Highs are affected. How one might control the internet supply is another matter.

RICHARD BARRACLOUGH QC