“Legal highs” in Romania: historical and present facts

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Abstract: In the modern history of our country, the subject of psychoactive substances was banned as being against the socialist-communist political ideology, and consequently the research and knowledge on the historical evolution of the use of plants and substances for medical, hedonistic and/or ritual purposes in our country was not given any encouragement. In this context of a diluted and outdated knowledge on the psychoactive substances which had been maintained for decades, the explosion of the drug addiction phenomenon encountered an idealistic perception (“it is a problem of the Western world”, “we are just a transit country”, etc.), which lead to a fast increase in the number of young people who tried to consume illegal drugs. The political/administrative organisations, the civil society, the NGOs and particularly the scientific experts in Romania had all a very slow and laggard response, which has lead to the current situation when drug addiction is finally recognized as a very serious issue.

Particular features of the Romanian phenomenon – surprisingly not due to the local tradition or spontaneous flora (as long as currently marketed products are imported) – are presented in this publication, giving examples from the criminal investigation experience. An alarming issue which has been highlighted by our research points to the fact that “classical drugs”, such as opioids, methadone, ketamine, MDMA, are likely to be used in Romania for “spicing up” the so-called “legal” marketed products.

In the following, we shall trace the historical evolution of the use of plants and substances for medical, hedonistic and/or ritual purposes in our country. We shall also reflect on the related legislative and medical issues, and the suggested measures.

Keywords: legal highs, historical facts, drug consumption patterns in Romania

Folklore sources have a rich representation of the use of native flora or imported vegetal products for various purposes, hence the classification of herbs as “medicinal”, “mythological”, “inspirational”, “magic”, etc.

The mandrake has a central role in therapeutic and psychotropic representations, and has been regarded as an epitome of miraculous plants, with numerous mystical and magic powers. It has been known and used as an aphrodisiac and for the dilation of the pupils (large and bright eyes, a standard of beauty in the medieval times, hence the name of belladona), anaesthetic, antidepressant, but also knowing the toxic potential of an overdose – a state of ecstatic frenzy (see the maenads – priestesses of Bacchus), and erotic hallucinations (due to the parasympathomimetic substances: hyoscyamine, atropine, scopolamine). In the folk Romanian medicine, we also found other potentially psychoactive plants: bay laurel, jimson weed or devil’s trumpet (Datura stramonium), valerian (Valeriana officinalis), corn poppy,aconite or monkshood (Aconitum tauricum), the Herb of Grace (Gratiola officinalis), ergot (Claviceps purpurea), henbane (Hyoscyamus niger), motherwort (Leonurus cardiaca), white bryony (Bryonia alba), cowbane (Cicuta virosa), harmful (Peganum harmala) (contains the alkaloid harmaline, a MAOI, similar with telepathine

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from Ayahuasca), known as early as the Getae-Dacian’s times [1]. Confusingly, but based on a clinical similitude, most of these plants were described under the generic name of mandrake, a ritual and healing archetype of the ethnobotanical research.

Like the mandrake, the henbane is a member of the Solanaceae class, and has anaesthetic and soporific effects after burning and inhaling the smoke, which reflect in numerous healing rituals[2]. Its use involves the boiling – decoction or infusion – of mandrake. An extended practice of merchants in the 19th century involves the addition of known potentially psychoactive plants to alcoholic drinks (jimson weed brandy – as the poet Vasile Alecsandri suggestively describes it)[3], which causes an exponential growth of the effects of alcohol, but may also give dependence – particularly psychological – on the overadded hallucinogens. Let us not forget that drinking laudanum (tincture of opium) was already customary, due to the Phanariote establishment. Seduction stories of that times could be associated nowadays, in the context of modern medical and criminal knowledge, with the “date rape” drugs, as the witches used to mix jimson weed seeds in the drinks they gave to their sexual victims (the witch-hunt in Western Europe also searched for courtesans who used vaginal aphrodisiac lubricants, sometimes with hallucinogenic side-effects, hence the witchcraft accusation).

A special category of plants frequently included in historical studies referred to the fungi, with their whole plurality of folk symbols, but also with an objective function of the clinical effects and medical usage. Amanita muscaria, which practically covers the whole north hemisphere, is known for its psychodysleptic effects.

The bay laurel (Laurus nobilis) is frequently mentioned in Romanian folk medicine, however its recognized psychoactive narcotic and hallucinogenic effects are known as early as the temple of Delphi, and continue with the Asclepius pharmacopoeia. The ivy and the common violet (Viola odorata) are also described as inducers of analgesic and hallucinogenic effects through dermal absorption (direct contact by wearing healing crowns).

In ethnobotanical studies, we also find references on the psychoactive effects sometimes observed and known after consuming honey which has been obtained from forests rich in rhododendrons. The consumption of ergot-contaminated rye flour (beside rich references on the ergotism or ergotoxicosis known as “Saint Anthony’s Fire” in Western Europe) also generated on Romania’s territory a few semio-clinical descriptions, such as sexual potency (by similitude with the love-potion from the Germanic legend Tristram and Isolde - Tristan und Isolde), including drinking a beverage obtained from fermented rye, known as kvass (or quass).

It is not our intention to dwell into the issue of established drugs, but we must recall the use of hemp preparations (considering the ongoing discussions among botanists on the basis of current marijuana derivatives, corroborated with the description of effects from historical sources, we cannot but see them as cannabinoids) by the ancient Dacians (and their habits of burning hemp seeds and plants) in folk medicine, in Dobrudjan baths or saunas, but also as part of traditional preparations: jolfa, “the cake of the dead”. Folk myth characters are closely associated with hallucinogenic episodes, with specific manifestations: the wicked fairies dancing naked with hemp crowns on their heads reflect the cannabinoid drunkenness, while the danewort-dressed “rainmakers” benefit from the antipyretic and analgesic effects of the plant. The folk dancers (“căluşarii”) predominantly use the wormwood during their magic-therapeutic rituals (the analogy with the effects of absinthe, which uses today the same basis for tincture, is obvious), but also garlic, Lady’s Bedstraw (Galium verum), the Herb of Grace (Gratiola officinalis); the clinical symptoms of the medicine man and of his patients are dose-dependant: pelinul te face bun sau nebun (“wormwood makes you healthy or mad”) – analgesia, narcosis, but also agitation, convulsions, hyperaesthesia, and depression.[3]

The post-communist era (after 1990) progressively, but inevitably witnessed not only the appearance, but more alarming, the development and diversification of drug consumption which threatens the public health, currently numbering up to 17,000 problem consumers of narcotics in Bucharest alone[4]. Until 2000, the reported substances (which were only isolated reports, considering the lack of technology for toxicological detection, and the lack of institutions and facilities for drug addicts) were mainly drugs marketed in pharmacies and only incidental reports of risk drugs.
However, after 2000 the drug market has been dominated by controlled substances, and opioids became the main cause of intoxication, including drug-related deaths.[5]

During the last few years, the growing consumption of psychoactive substances which are not under national/international control, in a similar international context, brings to attention the historical use of plants for hedonistic purposes. The rediscovered traditions of self-intoxication are enhanced today by overadded synthetic substances, while sometimes the product basis is only an excipient-vehicle for much more potent, new substances for the current toxicological practice. (The declared content of marketed products refers to ordinary flora – birch, salad, Peru balm, patchouli, bay laurel, wheatgrass, allspice, hop, etc. Note the ubiquitous availability and the benign character of these plants, and the absence of any known plants from the pharmaceutical practice as a source of psychoactive substances.)

During 2010, in Romania were registered over 200 companies which market substances and products widely sold internationally under the generic name of “legal highs”, in over 400 shops in the whole country – the so-called “dream shops”. The names of “ethnobotanical plant” or “ethnobotanical drug” are linguistic barbarisms! The correct definition for ethnobotany is: the branch of botany concerned with the use of plants in folklore, religion, etc. (from the French word ethnobotanique - „ethnobotanical” used about drugs refers to the plant lore associated with shamanic, entheogenic or bio-agricultural practices). The so-called echo-drugs are plants which have been used for centuries by South and Central American populations for divination, religious rituals, and to contact supernatural forces.

However, notwithstanding the hesitation and extreme laggardness of the state institutions in front of the development of networks for marketing psychoactive products, of which the authorities never asked for a sustained scientific account, the legal medicine tried to impose the opinion that the new trend of psychoactive drugs appeared on the consumers’ market poses a great risk only for the reason that, by not being forbidden by law, is it implicitly admitted as legal. In 2010, Romania had over 200 companies which marketed such substances, in over 400 shops in the whole country – ethnobotanics, dream shops (virtually available in 2/3 of the EU countries – smart shops, sex shops, head shops, gas stations in Luxemburg – 7% of these were open in Romania in 2009).

The growing phenomenon lead to excessive media coverage, however this has generated an alarm signal for the authorities, in the absence of signalling consecutive cases by objective evidence. The technical and methodology pitfalls of toxicological detection[6,7], both from biological samples and by analysis of the corpus delicti, did not allow forensics to provide a correct representation of the consequences of the chronic use of less-known products, of uncertain origin and content, which have known an alarming diversification of the administration routes, including injection. The emergency medical facilities were among the first to draw the attention on the growing number of acute/chronic intoxication cases and on the complications brought by the use of these substances. Comparative analyses of the cases reported by criminal investigators (based on evidence and analysis of the corpus delicti) or by the emergency medical facilities (clinical data), echoed by next of kins of the patients and by mass-media, corroborated with the results of forensic exams (toxicology, necropsy), constantly revealed a significant discrepancy between the final results. In all cases (most of which had a history of consumption of products from these shops, followed by death), considering the additional information (the investigation and statements) – cases brought to the attention of the National Institute of Legal Medicine as suspect of DRD – the following high-risk drugs were identified: opioids, methadone, ketamine, etc.
   - the drugs were possibly bought from the shops or on the street
   - the bought product was possibly sprinkled with illegal drugs
   - it is possible that due to scientific, methodological, or material limitations, the “legal drugs” from the composition might not have been detected, but it is difficult to evaluate their hypothetical role for the cause of death, because of the lethal concentrations of all present substances
   - no DRD was concluded to be a death due to intoxication with legal highs
   - it is also possible that these frequent, known consumers, with a long history of drug abuse, might have replaced or supplemented the daily doses with the more easily available, cheaper, alluring products
   - in all of these cases, the symptoms of chronic use of injectable drugs was identified
- a significant part of these cases showed advanced biological degradation – atrophy – frequently associated with systemic sepsis, without a primary focus – which supports haematogenic multiplication of germs by direct introduction in the blood flow, due to the injection of products highly-contaminated with bacteria (which is plausible with products containing vegetal fragments).

The extreme difficulty of finding toxicological evidence for the consumption of legal highs (in the international world) remains a challenge. The Romanian situation is particular in that ketamine occurs as a new DRD-inducer [8], besides the known opioids and benzodiazepines [8] commonly used by consumers with a long history of drug abuse.

The state and local legislation regarding the legal regulation of legal drugs is not strong enough to limit the phenomenon, which reflects in the continuous series of cases and the maintenance of the number of deaths at levels similar to the previous years.

One cannot compare retrospectively the historical use of plants with the current use of “legal” substances for hedonistic purposes: none of the practices quoted from folk sources is identified in the current use of imported products, with a high content of non-native plants (if we take the package insert for granted) and with no link to traditional purposes/events/traditions, but only used for their psychoactive effects.

References