

# Psychiatric disorders induced by the use of opioids and cannabinoids

## Opioid use disorders

- Opium, morphine, synthetic (codeine, heroin, methadone, buprenorphine, ...),
- analgesics , antispasmodics, antitussives,
- the dried juice of unripe poppy seeds has many alkaloids.
- *Soldier sickness* – morphine was freely used in wars, soldiers were then addicted (American Civil War 1861-1865, Franco-Prussian War 1870-71).
- Since the early 1970s – drug mafias, heroin,
- *braun* – Czech product, mixture of codeine opiates,
- the historical shift in application is significant – from smoking, sniffing, to injection.

 For more information see *Substance Abuse*.

## Symptomatology

- Dampening, calming, euphoric effect, speed of onset according to application,
- duration of effect (heroin 3-4 h, morphine 4-5 h, buprenorphine 6-8 h 48 h, methadone 12-24 h).

## Acute intoxication

- Apathy, depression, slowing down of psychomotor skills, disinhibition, deterioration of attention, judgement,
- numbness, slurred speech, narrowing of the pupils, impaired consciousness ,
- euphoria, relaxation, pleasant fatigue,
- there is a risk of depression of the respiratory center, hypotension and hypothermia,
- decreased GIT motility, constipation, spasms.

## Harmful use

- Mainly infections – HIV , hepatitis .

## Addiction syndrome

- Very quickly, within weeks, especially with IV administration.

## Withdrawal status

- Very often, in 4-6 hours after the last dose,
- usually not life-threatening,
- flu symptoms – nasal discharge, sneezing, lacrimation, pain and muscle spasms, abdominal cramps, nausea, vomiting, diarrhea, dilated pupils, piloerection, chills, tachycardia, hypertension, insomnia.

## Psychotic disorders

- They don't call them out.

## Course and prognosis

- It depends on the purity of the substance, often other alkaloids – organotoxicity,
- disorders of thinking, behavior (anesthetic states), development of a personality disorder (accentuation of negative traits), libido disorders, amenorrhea, avitaminosis, deterioration of the organism,
- social problems, problems with the law,
- resocialization is possible.

## Etiopathogenesis

- There are also people with minor disorders in neurotransmitters – susceptibility, more frequent occurrence of the A1-dopaminergic D2-receptor allele, very rapid habit formation.

## Therapy

- Acute intoxication – naloxone – opiate antagonist, causes withdrawal symptoms in addicts,
- treatment of withdrawal syndrome - inpatient, substitution treatment - buprenorphine, methadone, symptomatic,
- withdrawal treatment - long-term comprehensive program, long-term maintenance substitution treatment - methadone, buprenorphine is also starting.

# Disorders induced by the use of cannabinoids

- Cannabinoids are from the Indian hemp *Cannabis indica*, or from the seeded hemp *Cannabis sativa* .
- The key substance in this cannabis is tetrahydrocannabinol (THC).
- Cannabis contains about 0.5-11% THC in its flowers.
- Hashish comes from the resinous substance produced by flowers and contains about 5x more THC than marijuana.
- Smoking or oral use has a longer effect.
- Excretion of THC takes a long time,  $t = 30$  h, with chronicity it is stored, then it can be released - the so-called flashback.
- The mechanism of action is complex, there are also specific receptors in the CNS .
- It has significant anticonvulsant, antiemetic, hypotensive and analgesic effects.
- Synthetics are used in ophthalmology to reduce pressure in glaucoma .

## Symptomatology

### Acute intoxication

- dysfunctional behavior, mood changes (euphoria or anxiety ), abnormal perception (hallucinations, slowed perception, ...), deterioration of judgment, attention, depersonalization, sometimes paranoia;
- inability to concentrate on demanding tasks even several days after ingestion;
- typical symptoms – injected conjunctivae, increased appetite, tachycardia , dry mouth.



Cannabis sativa

### Harmful use

- chronic inflammation of the lungs, fertility disorders, risk of premature birth;
- long-term use – anxiety-depressive states, apathetic-abulous syndrome, schizophrenia.

### Addiction syndrome

- psychological, tolerance as an adaptation mechanism of the CNS.

### Withdrawal status

- exceptionally (due to slow excretion), psychomotor restlessness, irritability, nervousness, anxiety, depression .

## Links

### Source

- BENEŠ, Jiří. *Study materials* [online]. [feeling. 2009]. < <http://jirben.wz.cz> >.