

The Therapeutic Use of *Cannabis Sativa*

FhD. Shkëlqim Hidri

University "Aleksander Xhuvani" Nursing Faculty, Elbasan, Albania

Preclinical and Clinical Department

Received: 30 January 2013; **Revised:** 10 February 2013; **Accepted:** 18 February 2013

Abstract: Cannabis sativa - a very curved name, often as a synonym for evil. Known and used since Antiquity, in almost all arts of the world, for medical purposes, but also industrial food today is questioned. Is it good or bad? Hard to say exactly! Called often as "killer plant", "plant cursed" in some cases has resulted in the "best" finding use in symptoms or pathology where known therapy has not been very effective. Purpose: According to published studies by many researchers, and some of the research on persons who have used hashish, some for pleasure and others for treating an illness (cancer and AIDS), may shed light on this very sensitive topic. Often combined with legal problems is not easy to give a final judgment. Method of study: The study is descriptive character. Conclusions: The data presented below suggest that there is enough space in which cannabinoids can be used effectively, but it has always and only for therapeutic purposes and without avoiding legal framework.

Despite extensive knowledge in the medical field, used canapes (*Cannabis Sativa*) is rather limited, despite its history of thousands of years, which shows that knowledge about its therapeutic potential are still insufficient. Problems related to the illegal status of cannabis, are the side effects of its therapeutic use. There are numerous drugs with great risk to create dependence; however, there are regularly described recipes. From the medical point of view the introduction of some cannabis derivatives as drugs that can not be recommended by prescription is wrong. A 96 year study showed clear therapeutic efficacy cannabis in several pathologies and that criticism about therapeutic cannabis ability, and especially TCH, were superficial, general and without any proof. So take into consideration the conditions in which cannabis products can be used safely. In addition to scientific data observations reported by patients who have resorted to the use of cannabis. For several years cannabis has become popular in terms of usage textile and precious edible oil obtained from its seeds, and its rediscovery as the curative substance causes turmoil and controversy.

Active components

Significant, pharmacological substances are the cannabinoids, found in plants of *Cannabis sativa*.

We found plants, amino acids, proteins, glycoproteins, glucide, terpens, phenols, hydrocarbons, alcohols, aldehydes, ketones, fatty acids, vitamins, lakton and steroids. In 1980 E. Turner describes about 421 chemical compounds present in *Cannabis Sativa*. Also the amount of each of these components is in different amounts in different species.

The cannabinoids

More than 60 different types of natural cannabinoids are recognized today. Among the main ones: Δ -9-tetrahydrocannabinoli (Δ -9-THC, or February THC) that acts as miorelaxant, antiepileptic, humor tonic, antibiotic, antipyretic and lowers intraocular pressure, bronchodilators.

Cannabidioli (CBD) without psychotropic effects strengthens the sedative effects of THC. Also acts as antiepileptic, anxiolytic and intraocular pressure stabilizer. Cannabidioli is second cannabinoids important of cannabis. Δ -9-THC is the main responsibility of the effect of intoxication. Cannabidioli antagonizes toxic effect caused by THC. So far it has been little studied and experimented only in animals. Other types cannabinoids are, cannabinioli (CBN), cannabigeroli (CBG), cannabivromi (CBC), Δ -8-THC, cannabivciccoli (CBL), cannabivtricoli (CBLT) cannabivodioli (CBND) etc., as well as their mixed form.

Effects

Cannabinoids act through receptors located in the cell membrane, creating with them a specific and reversible connection. In the early 90s was discovered anandamidi produced by the body that connects receptor cannabinoids. Natural Cannabinoids bind to the same receptor in the membrane of nerve cells. Strangely cannabinoids and anandamides have very different chemical structure.

Receptors of cannabinoids

In 1987 it was discovered the mechanism cannabinoids transport to receptors. In 1988 Devant and Johnson showed a specific cannabinoids receptor in mouse brain. Later it was discovered receptor cannabinoids in quite mamiferes and in humans. Besides brain receptor (CB1), were found in immune cells of spleen (CB2). Different Cannabinoids related in many different ways with CB1 or CB2.

Scope

Paul Consroe and Reuven Sandyk in 1992 showed therapeutic effects cannabinoids and neuropatiks neurological disorders (spasms, cramps, headaches, epilepsy). The most important component is THC which is regarded as a depressant, stimulant or halucinogen. The possibility of use of cannabis extracts and natural special cannabinoids refer mainly to: Lack of appetite (anorexia) and organic depression (kahexia) in AIDS and some types of tumors; Nausea in radiotherapy and chemotherapy and AIDS; Muscular spasms (in spinal cord injuries and multiple sclerosis); Pain condition (headache, tumor pain, neuropatiks, muscular, dismenorrhoea) and Glaucoma.

Other indications cannabinoids are Bronchial Asthma, epilepsy, depression, hypertension, fever, dysentery. Antibiotic potential of cannabis can be used especially in the preparation of ointments.

Improve the tone of humor

Cannabis intoxication brings decrease of physical and mental suffering, contributing to the facilitation of relations with them disease. The question "why exactly I", are inevitable to the patients. desiring to live and the courage to face the disease, reflected in a positive manner during the course of many diseases, and despair does not nonetheless aggravate the situation. Walton published a series of experiences with hashish among which that of a doctor: *After an hour developed a state of unspeakable miracle which was absolutely personal and fusion with the entire universe. The skin was moist, dry mouth, a wonderful color landscapes vision, stained image: blue, purple and was sorry I can not share with someone else this experience. In addition enter into a state of sleep and sleep until the usual hour. All the above feelings in the morning were disappeared. One user said: An hour after, a full sense of pleasure and wellbeing. Two hours later, a nasty feeling, followed by feeling nausea and vomiting, pathological fear of being watched by someone. Nearly three hours after he felt quite well and wake up from this state of lethargy. Following spent a nice night without consequence.*

Cancer

During the '70s there were used for the first time a combination of drugs for the treatment of cancer. After hundreds of clinical research today are achieving good results in the treatment of leukemia. We combined therapies are generally cytostatics, which recognize and kill tumor cells, but at the same time they kill healthy cells giving very severe side effects: hair fall, injury or cardiac, hepatic, renal, bone marrow, etc. Among the side effects of this therapy are nausea and vomiting, which should reduce the dose. But this reduces the effectiveness of the therapy, while the success is related to the delivery of standard doses. In some patients these side effects are so severe as leading to abandonment of therapy. In these cases, used different antiemetiks, but not always turn out to be effective. In 1975 published the first study that showed efficacy of THC against provoking vomiting from chemotherapy. In the USA in 1985 came on the market synthetic THC MARINOL against vomiting in chemotherapy. Pharmacological studies show that active components of cannabis can be used successfully in the treatment of vomiting from other causes. In the 80s in Germany became a study levonantradol where noted improvement in 17 of 20 patients, who previously did not respond to drugs antiemetiks. In 5 subjects symptoms disappeared immediately. In 1998 Vinciguerra with an experiment on 56 patients less sensitive to routine treatment, showed efficacy against marijuana in 44 cases. In 1995, in Israel were studied 8 children with various forms of cancers, who went under underwent preventive therapy with Δ -8-THC. 8 patients received relatively high doses of TCH, about 18mg/m² body surface two hours prior to the use of chemotherapy and then after 6 hours. The vomit was opposed due to THC. In two children appeared lighter side effects. We believe that the improvement of the overall quality of life due to cannabis should serve as impetus in continuing research by researchers in relation to his antiemetiks effects.

AIDS

Persons affected by AIDS suffer weight loss due to nausea and reduction of appetite. Show that after taking cannabis patients feel the need to eat again. Medicines used in the treatment against the virus are often the cause of a strong state general deterioration, which often puts lives at risk. The increase in weight in very weak patients means to prolong life, as has been proven by various studies. Among other things cannabis improves mood and combats the possibility of decline in depressive condition, what positively affects the immune system. Results of a U.S. study published in 1991 showed the effectiveness of THC in stimulating appetite in patients affected by AIDS, only with doses of 5 mg per day. Before the start of treatment was seen a weight loss of about 0900 kg, while under the effect of THC pasha increased on average 1kg per month. Research conducted in 1995 by Beal in which participated 139 patients, led to the authorization use of Maronol, THC-based preparation of synthesis, even in patients affected by AIDS. For many years, is known efficacy of cannabis in stimulating appetite but should not be associated with a reduction in blood sugar level, as referred incorrectly before, but probably by a direct action on the central nervous system. A man 45 years old, HIV-positive indicates that he had learned to use therapeutic cannabis. THC was helping to cope with the side effects of anti-AIDS therapy. A female of 11 years old with HIV-positive indicated that after she learnt that she was carrying the virus, smokes hashish. If we understand that the dinner was not eaten all day, smokes 2 cigarettes sleep and when he woke up after 2-3 hours was hungry.

Bibliography

1. Cannabis als MEDIZIN. Beiträge auf einer Fachtagung zu einem drängenden Thema. Deutsche AIDS-Hilfe e.V., Berlin 1996.
2. Abbound, R. T. Saunders, HD: Effect of Oral Administration of deltatetrahydrocannabinol on airway Mechanics in normal and asthmatic subject.
3. Abel, E. L.: Marijuana, the First Twelve Thousand Years. Plenum Press, New York 1980. Abrahamov, A. Mechoulam, R.: And efficient new cannabinoid antiemetic in pediatric Oncology. *Life Sci.* 56, 2097-2102 (1995).
4. Agurell, S., Dewey, W.L., Willette, R.E. (A CURA di): The Cannabinoids: Chemical pharmacologic and therapeutic Aspects. Academic Press, New York 1994.
5. Agurell, S., Halldin, M., Lindgren, J. E., Ohlsson, A., Widman, M., Gillespie, H., Hollister, L.: Pharmacokinetics and metabolism of delta 1-tetrahydrocannabinol and Other cannabinoids with emphasis on man. *Pharmacol. Rev.* 38, 21-43 (1986).
6. Alozie, S. O. Martin, B. R., Harris, L. S., Dewey, W. L.: 3H-delta 9-Tetrahydrocannabinol, 3H-cannabinol and 3H cannabidiol: Penetration and the regional distribution in rat brain. *Pharmacol. Biochem. Behav.* 12, 217-221 (1980).
7. Azorlosa J.L., Greenwald, M. K., and Stitzer, M. L.: Marijuana smoking: effects of varying puff volume and breathhold duration. *J. Pharmacol. Exp. Slaughter.* 272, 560-569 (1995).
8. Barnett, G. Chiang, C.W., Perez-Reyes, M., Owens, S. M.: Kinetic study of smoking marijuana. *J. Pharmacokinet. Biopharm.* 10, 495-506 (1982).
9. Beal, J. E., Olson, R., Laubenstein, L., Morales, J. O., Bellman, P., Yangco, B., Lefkowitz, L., Plass, T. F., Shepard, K. V.: Dronabinol as a treatment for anorexia Associated with weight loss in patients with AIDS. *J. Pain Symptom.*