



BHANGA:- A DRUG REVIEW

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ABSTRACT- *Ayurveda* is a medicinal pathy of ancient India. Even the poisonous plants have been used for medicinal purpose in *Ayurveda*. It has been said in *Ayurveda* that if poison used in a therapeutic dose will provide results in a beneficial way to the patient. [Acharya Chark].

“विषं प्राणहरतच्च युक्तियुक्तं रसायनं” (च.चि.२४/६०)

This article deals with *Bhanga*'s characteristics toxicological properties and therapeutic uses. Cannabis is also called marijuana, hashish, ganja etc. It is classified under deliriant cerebral narcotic plant. It is also classified as mild hallucinogen or a sedative or a narcotic. *Bhanga* is considered as the most abused drug all over the world. A form of *Bhanga* is also known as ganja in India. Ganja is made from the flowering tops of the female hemp plant. Another form of *Bhanga* is hashish known as *Charas* in India.

KEYWORDS: *Ayurveda*, *Bhanga*, cannabis, deliriant, narcotic, marijuana, hashish, charas, ganja.

INTRODUCTION

Bhanga is an important poisonous plant, which has been used as a medicine from ancient time. *Bhanga* or Bhanga is the term used to denote a kind of soma in *Regveda*. Medicinal use of *Bhanga* started from “*Gadnigraha*” as written by “*Shodhal*”. This had been produced throughout the world for making fiber and seeds. It seems to be that initially it was only used for making fiber, which is mentioned in dictionaries as “*Shana*”. Later on *Bhanga* used as a narcotic and got popular by the name of “*Makulani*”. *Dhanvantrinighantu* has described *Bhanga* under *Medavishesh* as *Vijiaya*.^[1]

Classification - *Bhanga* classified under the family *cannabaceae* and genus *cannabis*.

Sanskrit name-*Bhanga*, *Ganja*, *Maatulani*, *Maadini*, *Vijaya*, *Jaya*.^[2]

Common name-Marijuana, Marihuana, Hashish, Pot, Hash, Grass, Weed.^[3]

Common preparation of *Bhanga* –*Bhang* –Dried leaves and stem made into a decoction. The dried mature leaves and flower stems are ground with water and mixed with milk or fruit juice. It is consumed by *Hindus* in India during festivals such as *Holi* and *Shivratri*.^[4] It is

also called as *siddhi*, *Patti* or *sabji* is the crudest form of cannabis.^[5]

Marijuana/ganja- dried flowering tops crushed and smacked in a pipe, or in the form of a cigarette (reefer or joint).

Marijuana “blunts” are cheap cigars sliced open, packed with cannabis, and resealed. The harsh stench of the cigar masks the characteristic sweet of cannabis. Blunts are very popular among the youth in some parts of the USA.^[6]

Hashish- it consists of the drug –rich resinous secretion of the cannabis plant.^[7]

Charas-It is also called as Hashish and is the purest form of cannabis. It is the dried resinous exudate from the flower tops.^[8] This drug is commonly used for its supposed aphrodisiac, hypnotic and analgesic actions. It leads to psychological dependence and intense craving in children.^[9]

Majun –sweetmeat prepared with plant extract.

Sinsemilla- seedless marijuana (unpollinated female plant).^[10]

Hash oil- A lipid soluble plant extract, may contain THC upto 25-60% and may be added to hashish and marijuana to enhance its THC concentration.

General description –A tall annual herb, 1.2- 4.9cm high, Stem- erect, angular, Leaves –palmately divided, Flowers –Small, greenish, unisexual, male borne in long dropping panicles and female in short axillary spikes, Fruit- an ovate flat seed –oke achene, having spiny growth. All plants parts give off a characteristic odour and covered with dense hairs which are viscid to the touch.

Major chemical constituents – *Bhanga* has more than sixty chemical constituents. Some important constituents are Cannabinol, tetrahydro-cannabinol, Cannabidiol, Cannabichromene, 1-dehydro-tetrahydrocannabinol, eugenol, sesquiterpenes, cannabinoids etc.^[11]

Active principle-It is not an alkaloid, but a fat – soluble oleoresin, cannabinol, the active form being Δ^9 -tetrahydrocannabinol (THC). It also contains benzopyrene, a known carcinogen which is also found in tobacco.^[12]

Ayurvedic classification- *Acharya Charak* described *Bhanga* in *Arshchikitsa*.^[13] *Acharya Sushrut* placed *Bhanga* in *mul visha*.^[14] *Acharya Chakrapanin* mentioned *Bhanga* in *Kushtchikitsa* and *Adhaya* by the name of *Indrashana*.^[15] *Acharya Bhavprakash* given synonyms of *Bhanga* and described it in *Atisharchikitsa* and *nindranash chikitsa*. *Bhavprakash* also delineate *Bhanga* in *haritkyadi varga*.^[16] *Priyavati sharma* classified *Bhanga* in *madkari*.^[17] According to *Sharangdhar* *Bhanga* described in *vyavai dravya*.^[18]

Parts used-leaves.

Therapeutic dose-*Bhang*-125-250mg, *Ganja*- 60-125mg *Charas*- 30mg.^[19]

Fatal dose- *Bhang*: 10g/kg body weight, *Charas*: 2g/kg body weight, *Ganja*: 8gm THC:30mg/kg bodyweight.^[20]

Fatal Period-Death is very rare, but it has ensued in twelve hours, and may be delayed for several days.^[21]

Characteristics according to Ayurveda^[22]- *Rasa*(taste)-*Tikta*(bitter), *Guna*(physical property)-*laghu*(light), *ruksha*(rough), *Virya*(Potency) – *ushana*(hot), *vipaka*(Post digestion effect)-*katu*(Pungent). Effect on *tridosha*- pacifies *kapha* and *pitta*.

Function^[23] –*dipana*, *pachana*, *grahi*, *madkari*, *nindrapradayani*, *kamoddipana* *kari*, *amasaya* *balaprada*.

Therapeutic uses as Ayurveda-1. pure *Bhang* 1 part, *Jayphal* 1part and *Indrayav* 2 part with honey is very useful in dysentery.^[24]

2-*Bhang* powder with honey and ghee using profusely milk and ghee in diet. by this all types of *Kustha* are destroyed and the person attains long life.^[25]

3-Roasted *Bhang* seeds powder with honey in the night is useful in *nindranaash*, *atisaar*, *grahani*.

4-*Bhang* leaves with hot water is useful in piles.^[26]

Other uses – the fibers of the woody trunk of *cannabis*, referred to collectively as Indian hemp, has been used for centuries to produce rope and twine, as well fine or rough cloth. The *cannabis* plant possibly the most efficient source of paper pulp, producing upto 5times as much cellulose per acre per year, as trees. Antiemetic against nausea and vomiting induced by anticancer drugs. THC in the form of a synthetic oral cannabinoid (“dronabinol”) has been shown to be effective in controlling the nausea and diarrhea associated with AIDS, as well as the nausea and vomiting caused by chemotherapy for cancer or AIDS. It also increases appetite and produces weight gain in both AIDS and cancer patients. Possible role in the treatment of convulsions, anxiety, pain and inflammation.^[27]

Routes of absorption- It can be absorbed through both gastrointestinal and respiratory tracts.

Signs and symptoms-*cannabis* toxicity usually presents in two forms.

- Acute poisoning
- Chronic poisoning.

Acute poisoning- clinical features vary with dose consumed.^[28] Inhalation is associated with more pronounced effects than ingestion-

With low dose changes perceived in the victim comprise of:

Initial euphoria with: Over talkativeness, perceptual alterations.

This may be followed by: Relaxation, drowsiness, hypertension, tachycardia, slurred speech, ataxia(rao), motor incoordination, stimulation of appetite. With higher dose change perceived in the victim comprise of: Conjunctival congestion and miosis, acute paranoid psychosis, depersonalization (rao), large doses produce nausea, anxiety confusion, delusion, and hallucinations, characteristic (burnt rope) odour, if the drug has been used for smoking, intravenous use can cause headache, diplopia, vertigo, dyspnea, hypotension, and renal failure.^[29] Rarely the victim may go into paralysis of muscles, loss of reflexes, coma and death.

Chronic poisoning-chronic poisoning can present in two forms-Cannabis addiction, Hashish insanity.

Cannabis addiction- chronic poisoning is resulting from continued use of the drug in any form of and is characterized by –anorexia, loss of weight, weakness, tremors, impotence and moral deterioration. The victim might become lethargic, apathetic, and disinterested to

work, and suffer from poor concentration (Amotivational syndrome).^[30]

Hashish insanity— chronic, heavy abuse of cannabis causes paranoid psychosis with violent behavior, culminating in homicide or suicide.^[31] (run-amok-it is a psychic disturbance resulting from continued use or sudden consumption of cannabis and is characterized by a desire to commit murders. After intake, there is a period of a depression, followed by a violent attempt to kill people.(impulse to murder). The addict first kills a person against whom he may have real or imaginary enmity and then kills anyone whocomes in his way, until the homicidal tendency lasts. The person may then commit suicide or surrender himself.^[32]

-increased susceptibility to pharyngitis, bronchitis, asthma and gynaecomastia (in males).

Treatment

Acute poisoning –Decontamination-stomach wash in case the drug has been ingested, haloperidol or other antipsychotic medication for psychosis, psychotherapy.^[33]

Chronic poisoning- Gradual withdrawal of the drug, diazepam for sedation, haloperidol for psychotic reaction, psychotherapy.

Important preparations in Ayurveda- *Jatiphaladi churna*, *Indrasana-rasayan*, Madanananda modak(G) Pushpdhanua ras (bhaisjya ratnavali).

Postmortem Findings- No specific findings, there will be usual findings of asphyxia.^[34]

Medico legal Aspects- most case of poisoning are accidental or due to overindulgence.

Majum and charas are sometimes used by thieves to stupefy persons to facilitate robbery.

Sometimes, it is taken by criminals before committing a criminal act, to strengthen nerves.^[35]

Cannabis is commonly used as an aphrodisiacs agent. It is supposed to evoke the desire for sexual enjoyment and also increase the duration of sexual act.^[36] Its use in chocolates causes intense craving among children for its euphoric effects.^[37]

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