

The Therapeutic Use of *Cannabis sativa* (L.) in Arabic Medicine

Indalecio Lozano

ABSTRACT. Arab scientists were several centuries ahead of our current knowledge of the curative power of hemp (*Cannabis sativa* L., Cannabaceae). Modern Western scientific literature ignores their contribution on the subject. We review in this paper the therapeutic uses of the plant in Arabic medicine from the 8th to the 18th century. Arab physicians knew and used its diuretic, anti-emetic, anti-epileptic, anti-inflammatory, painkilling and antipyretic properties, among others. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: <getinfo@haworthpressinc.com> Website: <<http://www.HaworthPress.com>> © 2001 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. *Cannabis sativa* L., Cannabaceae, therapeutic uses, Arabic medicine

INTRODUCTION

The modern medical and pharmacological literature which deals with the therapeutic properties of hemp (*Cannabis sativa* L., Cannabaceae) tends to ignore the valuable contributions of Arabic scientists on the subject. The tradition of the plant's medicinal use was adopted by these scientists from the cultures of the Ancient World, having been used for over a thousand years as a textile and medicine in Arabia, Mesopotamia, Persia, Egypt, China, India and extensive areas of Eu-

Indalecio Lozano, PhD, is affiliated with the Universidad de Granada, Facultad de letras, Departamento de Estudios Semíticos, 18071 Granada, Spain.

rope (Levey 1979; Escohotado 1989-1990). The role played by the medical, pharmacological and botanical literature of the Greeks in this regard is well-known, dominating medical circles in Asia Minor, Syria, Egypt and their neighbouring regions right up until the arrival of Islam in the 7th century. The *Materia medica* of Dioscorides (1st century), translated into Arabic by Istifān b. Bāsīl in the days of the caliph al-Mutawakkil (d. 861 A.D.), and the *De Simplicium medicamentorum temperamentis ac facultatibus liber VII* of Galen (d. 199 A.D.) similarly translated by Hunayn b. Ishāq (d. 873 A.D.), were by far the most important sources for Arabic physicians, and were a decisive stimulus in the development of their knowledge of the plant.

To date, there are only a few works that deal with the history of the therapeutic use of hemp in Arabic medicine (Hamarneh 1972; Levey 1979; Lorano 1990), and even these only tangentially. The current renewed interest in research into the curative potential of the plant justifies a review of the subject in the light of new Arabic documental sources.

MATERIALS AND METHODS

Medical, pharmacological and botanical literature written in Arabic has been systematically and exhaustively consulted, as far as possible, from the 8th to the 18th century. Over the same period, lexicographical, agricultural, literary, legal, historical and geographical sources, which were likely to contain data on *Cannabis sativa* (L.), were also examined. The great majority were published texts, though some manuscripts were also examined. Of all the texts reviewed, more than fifty contain information on the plant, although due to limited space not all of them are mentioned in the bibliography.

In the results, we have focused our attention on the discoverer or pioneer of each therapeutic use, and only the most significant contributions of later authors have been cited. Thus, not all the sources that mention these uses have been included.

This paper arises out of a background of historical philological studies on Arabic-Islamic medicine and thus it neither can nor seeks to tackle any debate on the pharmacological mechanisms involved in the therapeutic uses documented here.

RESULTS

“Temperament” of the Plant, Parts Used, Modes of Preparation and Administration

Arab scientists explained the curative properties of hemp according to the principles of the humoral theory they learned from the Greeks. As is well-known, this theory assumes that each simple possesses a characteristic, “temperament,” determined by its degrees of “heat,” “cold,” “wetness” and “dryness.” Similarly, they largely accepted the opinion of Galen (1821-1833, VI pp. 549 f. and XII, p. 8), who talks of the desiccating and warming power of hemp. However, there is no lack of prestigious authorities who had quite the opposite opinion, stating that cannabis is naturally cold (al-Tabarī 1928, p. 376), or composed of hot and cold parts (al-Antāki, n.d., I, p. 219; al-Qūṣunī 1979-80, I, pp. 56 f.). There is even greater controversy over the definition of the degree of heat and dryness possessed by the plant, Arab physicians citing properties from the first to the third degree. This is not surprising, if one takes into account that they could find no reference to help them in the works by Galen and Dioscorides, and that the concept of temperament and its degrees do not permit empiric proof in the sense understood by current scientific methods.

The part of the plant that was most used in therapeutic treatments was the seeds, and to a lesser extent the leaves. Methods of preparation differ according to the ailment to be treated, using the oil obtained from the seeds and the juice from the leaves and green seeds.

It was administered externally in the form of ointment in the nose, orally or in drops into the ears. Only very rarely is the actual dose which should be used in each treatment mentioned. It seems that it was commonly used as a simple medicament.

Treatment of Ear Diseases

The first mention of the curative power of hemp in Arabic literature was by Ibn Māsawayh (al-Rāzī 1968, XXI i, p. 124) (d. 857 A.D.), who refers to the oil obtained from hemp seeds and applied in drops into the ear as having the virtue of drying out the “moisture” (*ruṭūba*) generated by this organ, a curative property which later physicians attribute to the juice of these seeds. In the period in which Ibn Māsa-

wayh lived, the works of Galen and Dioscorides were translated. From them, Arabic physicians learned the use of the juice of green hemp seeds in the treatment of earache caused by an obstruction in the ear (Galen 1821-1833, VI pp. 549 ff.; Dioscorides 1957, p. 304). Continuing this tradition, in the 10th century Ishāq b. Sulaymān (1986, II, p. 133) stated that hemp seed oil relieved earache caused by the “cold” (*bard*) and the moisture in the organ, and also talked, for the first time, of its power to unblock any obstructions there. In the 13th century, the botanist from Malaga, Ibn al-Bayṭār (1291 A.H., II, pp. 115 f.) prescribed hemp seed oil to cure “gases” (*rīḥ*) in the ear. In the 14th century, Ibn al-Jatīb (1972, p. 69) from Granada recommended the use of this oil mixed with gum resin of *Ferula galbaniflua* to relieve “hot pain” (*al-waḥ̣ḥ̣ ḥarr*) associated with *tinnitus aurium*. In the 16th century, al-Antāki talks of how the leaves of “Anatolian hemp,” as he calls it (*al-qinnab al-rūmī*) (Lozano 1996, pp. 152 ff.), kill the “worms” which develop in the ear, and adds that they have unblocking properties, as if you fill the ear with them, all the foreign material which is lodged there will be expelled.

Vernucide and Vermifuge

In the 9th century al-Dimaḡī (Ibn al-Bayṭār 1291 A.H., IV, p. 39) is the first author who mentions the vermucidal and vermifugal properties of the plant, saying that it has the power of killing the “worms” (*al-dīdān*) that grow in the body. Between the 11th and 12th centuries, the anonymous author of the *Umdat al-tabīb* (1990, II, n° 2149) asserted that anyone who has tapeworms should eat hemp seeds, as their shells fill up with the parasites and are then expelled with them in the feces. Between the 14th and 15th centuries al-Firūzābādī (1952, I, p. 203) states that if the seeds of the plant are ingested or applied in the form of ointment over the stomach, this kills ascaris (*ḥabb al-qar'*).

Treatment of Skin Diseases

Ibn Māsawayh (al-Rāzī 1968, XXI i, p. 124) is the first author who refers to the use of hemp in the treatment of pityriasis (*ibriya*) and lichen (*ḥazāz*), and suggests that the affected part of the body should be washed with the juice from the leaves. In the 11th century Avicenna

(1294 A.H., I, p. 434) recommends oil from the seeds for the same purpose. Al-Fīrūzābādī (1952, I, p. 203) asserts that hemp seeds can be used to treat vitiligo (*al-bahaq*) and leprosy (*al-baras*).

With regard to the treatment of skin diseases, and halfway between dermatology and cosmetics, al-Rāzī (al-Bīrūnī 1973, I, p. 33) (d. 925 A.D.) was the first to prescribe the use of hemp leaves as a substitute for *Melia azedarach* (L.) (Meliaceae) to stimulate hair growth. According to Ibn ʿAlī (1000 A.D.) the leaves should be macerated in water and then applied to the roots of the hair.

Purging Qualities

The first reference to the purging properties of hemp is made by al-Dīmāshqī (Ibn al-Bayṭār 1291 A.H., IV, p. 39), who states that the juice from hemp seeds, administered through the nose, purges the brain. In the 9th century this use is also cited by Ṭābit b. Qurra (1928, p. 21, 97), who includes hemp among the simples that can purge the upper part of the liver and eliminate any obstruction produced in this organ. He prescribes that the hemp seeds should be taken with honey mixed with vinegar.

Diuretic Properties

The pioneer of the diuretic power of hemp seeds is Ishāq b. ‘Imrān (Ibn al-Bayṭār 1291 A.H., IV, p. 39) (d. 907 A.D.). In the opinion of Ishāq b. Sulaymān (1986, II, p. 133), this property is due to their warming power.

Antiepileptic Properties

Between the 10th and 11th centuries al-Maʿsūmī (1877, II, p. 116) talks for the first time of the use of hemp in the treatment of epilepsy and prescribes that the patient should be given the juice of the leaves through the nose. In the 15th century, al-Badrī (Lozano 1989-90, p. 174 f.) provides us with a spurious tale in which hemp leaves are presented as a remedy that gives an immediate cure to epilepsy.

Carminative Properties

The carminative properties of hemp seeds, already known by Galen, are mentioned for the first time by Ishāq b. Sulaymān. Al-Maǧīṣī (1877, II, p. 116) writes that the leaves have the same property and adds that they can be used to treat gases generated in the uterus, intestines and stomach.

Treatment of Abscesses and Tumours

Between the 11th and 12th centuries Ibn Buklārī[°] (679) prescribes the juice from hemp leaves to cure abscesses (*jurāṭ*) occurring in the head. One century later, Ibn al-Bayṭār states that if an “oily wax” made with hemp seed oil is applied to hardened tumours (*al-awrām al-ṣiya*), they dissolve.

Liquification and Purging of Humors

Ishāq b. Sulaymān mentions for the first time that hemp seeds increase the liquidity of the corporal humors. Al-Maǧīṣī (1877, II, p. 116) attributes the same property to the leaves of the plant and says that they can be used to purge phlegmatic excretions from the stomach. Ibn Habal (1362 A.H. II, p. 185) (d. 1213 A.D.) indicates that hemp seeds are good for evacuating bile and phlegm.

Treatment of the Hardening and Contraction of the Uterus

Ibn al-Bayṭār (1291 A.H., II, p. 116) prescribes hemp seed oil for treating these ailments.

Pain-Killing Properties

The use of hemp as a pain-killer was not limited to the treatment of earache. Ibn al-Bayṭār (1291 A.H., II, p. 116) recommends hemp seed oil for soothing neurological pains (*waṣab*). Around the same time, al-Qazwīnī (1849, p. 293) (d. 1283 A.D.) says that the juice can be used to soothe ophthalmia.

Antipyretic Properties

Al-Firūzābādī (1952, I, p. 203) sustains that hemp seeds are an effective remedy in curing *febris quartana* (*hummà l-rib'*).

Antiparasitic Properties

Al-Antākī says that the boiled leaves from “Anatolian hemp” kill lice and nits if used to wash the part of the body where these parasites are.

Antiemetic Properties

The same al-Antākī attributes anti-emetic properties to the seeds from “Anatolian hemp.”

CONCLUSION

Arab scientists were several centuries ahead of our current knowledge of the curative power of *Cannabis sativa* (L.). They knew and used its diuretic, anti-emetic, anti-epileptic, anti-inflammatory and pain-killing virtues, among others. For this reason, it seems reasonable to suggest that the data to be found in Arabic literature could be considered as a possible basis for future research on the therapeutic potential of cannabis and hemp seeds. This would seem to be particularly necessary if we take into account that currently, the traditional use of the plant among Arab Islamic peoples of the world has almost completely disappeared due to the legal restrictions which prohibit its cultivation and use.

REFERENCES

- Al-Antākī. n.d. *Taḍkirat uli l-albāb wa-l-ḥimī li-l-‘aḥḥab al-‘uḥḥab*. Beirut: Al-Maktaba al-Ṭaqāfiyya.
 Avicenna. 1294 A.H. *Al-Qānūn fī l-tibb*. Būlaq.
 Al-Bīrūnī. 1973. *Kitāb al-ṣaydana*. H. M. Said and R. E. Elahie (Eds.). Karachi.

- Dioscorides. 1957. *Kitāb al-Haḥḥ fī hayūlā l-tibb*. C. E. Dubler and E. Terés (Eds.). Barcelona.
- Al-Fīrūzabādī. 1952. *Al-Qāmūs al-muḥīṭ*. Cairo.
- Galen. 1821-1833. *Claudii Galeni opera omnia*. C. G. Kuhn (Ed.). Leipzig.
- Hamarneh, S. K. 1972. Pharmacy in Medieval Islam and the History of Drug Addiction. *Medical History* 16: 226-237.
- Ibn al-Bayṭār. 1291 A.H. *Kitāb al-Ḥimī' li-mufradāt al-adwiya wa-l-agḍiya*. Būlāq.
- Ibn Buklārī. *Al-Musta'īnī fī l-mufradāt al-tibbiyya*. Ms. al-Jizāna al-'Āmma of Rabat, N. 481.
- Ibn Habal. 1362 A.H. *Kitāb al-Mujtārāt fī l-tibb*. Haydarabad: Dā'irat al-Ma'ārif al-'Uṭmaniyya.
- Ibn al-Jatīb. 1972. *Kitāb 'Amal man ṭabb li-man ḥabb*. M. C. Vázquez de Benito (Ed.). Salamanca: Universidad.
- Escotado, Antonio. 1989-1990. *Historia de las drogas*. Madrid: Alianza.
- Ishāq b. Sulaymān. 1986. *Kitāb al-Agḍiya*. F. Sezgin (Ed.). Frankfurt am Main: Institute for the History of Arabic-Islamic Science.
- Levey, M. 1979. Hashīsh. In: B. Lewis, V.L. Ménage, Ch. Pellat and J. Schacht (Eds.). *The Encyclopaedia of Islam*. Leiden-Iondon: E. J. Brill-Lurac & CO.
- Lozano Cámara, Indalecio. 1989-1990. Un fragmento del Kitāb Raḥat al-arwah fī l-ḥaḥḥ. *Miscelánea de Estudios Árabes y Hebráicos* 38 (i): 163-183.
- Lozano Cámara, Indalecio. 1990. Acerca de una noticia sobre el qinnab en el Ḥimī' de Ibn al-Bayṭār. In: E. Garcí Sánchez (Ed.). *Ciencias de la Naturaleza en al-Andalus (Textos y estudios I)*. Granada: C.S.I.C.
- Lozano Cámara, Indalecio (1996). Terminología científica árabe del cáñamo. In: C. Álvarez de Morales (Ed.). *Ciencias de la Naturaleza en al-Andalus (Textos y estudios IV)*. Granada: C.S.I.C.
- Al-Maḥḥī. 1877. *Kāmil al-sinā'a al-tibbiyya*. Būlāq.
- Al-Qazwīnī. 1849. *Kitāb 'Aḥḥ ib al-majlūqāt*. F. Wüstenfeld (Ed.). Göttingen.
- Al-Qūṣūnī. 1979-1980. *Qāmūs al-atibbā' wa-nāmūs al-alibbā'*. Damascus: Maḥḥ al-Luga al-'Arabiyya.
- Al-Razī. 1968. *Kitāb al-Hawī fī l-tibb (t. XXI: Fī l-adwiya al-mufrada)*. Haydarabad: Dā'irat al-Ma'ārif al-'Uṭmaniyya bi-l-Ḥimī'a al-'Uṭmaniyya.
- Al-Tabarī. 1928. *Firdaws al-hikma fī l-tibb*. M. Z. Siddiqi (Ed.). Berlin.
- Ṭābit b. Qurra 1928. *Kitāb al-Dajira fī 'ilm al-tibb*. G. Sobhy (Ed.). Cairo: al-Matba'a al-Amīriyya
- 'Umdat al-ṭabīb fī ma'rifat al-tibb. 1990. M. 'A. al-Jatīb (Ed.). Rabat: Akādīmiya al-Mamlaka al-Magribiyya.

RECEIVED: 10/17/99

ACCEPTED IN REVISED FORM: 02/18/00