



Consequences of Opioid Abuse and their Treatments in Persian Medicine: A Review Study

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Review Article

Abstract

Background: Drug addiction is a major health problem for modern human communities. The earliest historical evidence of opium use can be found in the writings of Theophrastus in the 3rd century BC. Since then, opium use and abuse has spread to all corners of the world, specifically the Eastern countries. This study aimed to investigate the consequences of opium use and their treatments according to Persian medicine.

Methods: In this narrative review, primary sources of Persian medicine and modern medicine databases of PubMed, Google Scholar, PsycINFO, the American Academy of Medical Sciences, and the United Nations Office on Drugs and Crime (UNODC) were searched with relevant keywords.

Findings: In Persian medicine, the Persian equivalent of the word “Opium” is “Afioon”, which refers to the sap of “Khashkhaash” or Papaver somniferum, traditionally used as a recreational drug as well as a sedative. Opioid use can cause social and psychological anxiety, muscle and tissue degradation, irritability, stomach weakness, loss of skin softness, and change in facial features.

Conclusion: Opium addiction is generally harmful to the body’s faculties. The repeated use of opium, disregarding circumstances and dosage of use and without the simultaneous use of its modifiers, can harm the entire body and even lead to fatality.

Keywords: Medicine, Traditional; Opium; Antidotes; Hypnotics and sedatives

Citation: Kamali M, Tajadini H, Mehrabani M, Moghadari M. **Consequences of Opioid Abuse and their Treatments in Persian Medicine: A Review Study.** *Addict Health* 2020; 12(1): 46-57.

Received: 21.08.2019

Accepted: 26.10.2019

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Introduction

Since time immemorial, humans have searched for ways to alleviate pain in themselves and others. Opium is one of the oldest pain-relieving substances known to humans. The Persian equivalent of the word opium is "Theriac", which refers to the sap of "Khashkhaash", that is opium poppy or *Papaver somniferum*. Addiction to opium and opioids, which is a generic term referring to opiates and their synthetic analogs,¹ is a major global health problem,² with dire outcomes including disability and premature death³ and significant economic burden arising from the cost of health care and rehabilitation and other direct and indirect costs, including the damage done by addicts to others.⁴ The pattern of consumption of these substances varies with the country.⁵ Afghanistan is the world's largest producer of opium and the main source of opium smuggled toward Europe. But, being the western neighbor of Afghanistan, Iran has the highest rate of opium seizures in the world.⁶

There is a long history of using opium as a folk medication in traditionally opium-producing regions and even some indigenous communities in the British Isles and America.⁷ In Iran, opium has been traditionally used as a pain-relief substance, especially for the elderly.⁸ In Afghanistan, women who work in the carpet weaving industry use opium to relieve pain and calm their children. In Morocco, opium poppy has been traditionally used to treat pain, diarrhea, cough, and insomnia.⁹ It has been estimated that in 2017, 53 million people (~47-60 million) or 1.1% of the global population had at least one instance of using opium. The highest prevalence of non-medical opioid use in North America (4%) is in the elderly population.¹⁰ In 2017, the prevalence of non-medical opioid use in the United States (US) was estimated to be 0.2%-0.4%, with a higher rate among women and people aged 26-34 years. The overall prevalence of non-medical opioid use in Americans aged 12 and higher is 0.3%.¹¹ In 2017, the prevalence of opioid use in European people aged 15-64 was 0.7%.¹² Although opioid abuse is more prevalent among men than women, its medical, social, and economic consequences are more severe among women, though the rate of opioid abuse among women is also on the rise.⁹ Opium abuse has many consequences including

elevated thyroid and sex hormones,¹³ increased risk of stroke,¹⁰ increased chance of preterm delivery,¹⁴ degradation of social and family relationships and increased chance of divorce,^{15,16} emotional and behavioral problems in children with drug-addicted parents,^{17,18} and child poisoning because of accidental opium ingestion. Today, we are also witnessing a sharp increase in the number of opium eaters who go to treatment facilities because of severe abdominal pain, anemia, or constipation.¹⁹ Historical evidence suggests that it was in the 16th century that opium abuse became a rising trend around the world, especially in eastern countries²⁰ and before that, opium had been used as a medicine for at least 3500 years.²¹ With the onset of opium addiction problem in Iran in the 16th century, Persian scholars of medicine started to list the effects of opium addiction and search for ways to treat this addiction.²² Persian medicine has a history of over 3000 years, and during this time, scholars of this medicine have made notable contributions to the medical field. The prime example of this is the works of Avicenna, which were among the primary references of medicine until about 300 years ago. Other well-known scholars of Persian medicine include "Trita and Jamasp" from the pre-Islamic period and Razi, Avicenna, Ahwazi, Akhvini, Seyyed Ismail Gorgani (Jorjani), Nafis Ibn Awadh Kermani, Aghili Khorasani, and Bahaodolle in the post-Islamic period. In the course of history, this school of medicine has suffered from the devastation of many geopolitical upheavals, most importantly the invasions by Greeks, Romans, Arabs, and Mongols, during which many written sources of this medicine have been lost. Yet, there are still over 10000 written sources of Persian medicine, which make it one of the richest branches of traditional medicine in the world.²³ Considering the positive views of the World Health Organization (WHO) on complementary and traditional medicine,^{22,24-26} reviewing the solutions of Persian medicine for treating the outcomes of opioid abuse, which are the culmination of hundreds of years of experience in this area, may prove useful for perfecting preventive measures and early and accessible therapeutic interventions for opioid abuse at both individual and community levels. Therefore, in this study, we reviewed the viewpoints of Persian medicine on

the consequences of opium abuse and its therapeutic recommendations for these consequences in order to achieve new insights into this issue and thereby contribute to efforts to tackle this challenge in Iran.

Methods

The Persian medicine literature was reviewed in search of materials about the definition and consequences of opioid abuse and the treatment of these consequences. Also, modern medical databases such as PubMed, Google Scholar, PsycINFO, the American Academy of Medical Sciences and the United Nations Office on Drugs and Crime (UNODC) were searched with the keyword "opioid" in 2019, the Persian medicine reference books reviewed in this study were:

- Qanoon-Fel-Tib (Avicenna-10th and 11th centuries AD)
- Exir-e-Azam (Muhammad Azam Khan Chashti-18th and 19th centuries AD)
- Qarabadeen Azam va Akmal (Mohammad Azam Khan Chashti-18th and 19th centuries AD)
- Mofareh-al-Gholoob (Muhammad Akbar Arzani-11th and 12th centuries AD)
- Tib-e-Akbari (Mohammad Akbar Arzani-11th and 12th centuries AD)
- Makhzan-al-Adviyeh (Muhammad Hussein Aghili Khorasani-18th and 19th centuries AD)
- Tohfe-al-Momenin (Mohammad Momen Tonekaboni-17th century AD)
- Zakhire Kharazmshahi (Seyyed Ismail Jorjani -11th and 12th centuries AD)
- Kholase-al-Hekma (Muhammad Hussein Aghili Khorasani-18th and 19th centuries AD)
- Qarabadeen-e-Kabir (Muhammad Hussein Aghili Khorasani-18th and 19th centuries AD)
- Resale Afyonieh (Emadeddin Mahmoud bin Massoud Shirazi-16th century AD)
- Khulasat-al-Tajareb (Bahaodolleh Razi-16th century AD)
- Al-Hawi (Mohammad Zakaria Razi-10th century AD)
- Al-Abnieh an Haghaegh-al-Adviyeh (Abu Mansour Movaffagh Heravi-10th century AD).

Results

The equivalent of the English word "opium" in the books of Persian medicine is "Afioon", which refers to the sap of "Khashkhaash" or Papaver somniferum.²⁷⁻³² Afioon is derived from the Greek

word "Opion"^{29,30} and the Persian word "Hepion".³³ The equivalent of this word in modern Persian is "Theriac",^{29,30,32,34} meaning antidote and what that induces deep sleep. Opium is obtained by taking the sap of opium poppy seed capsules and has a foul bitter smell.³³ According to most scholars of ancient Greek (Unani) medicine, opium has a cold temperament (Temperament or "Mizaj", literally meaning combination, refers to a new quality that results from the combination of the four basic elements, water, fire, air, and earth, and their interaction in a compound object). According to Persian medicine, each compound object consists of these four elements and the differences in the amounts and proportions of these elements determine the temperament of that object. There are nine major types of temperament: moderate, warm, cold, dry, wet, warm and dry, warm and wet, cold and dry, and cold and wet³⁵ each of these temperaments has four degrees. Opium has cold of the 4th degree and dry temperament of the 3rd degree. Many Persian scholars following the school of ancient Greek medicine also believed that opium has a cold and dry temperament.^{28-30,33,36}

Some scholars of Persian medicine believe that opium is a "morakab-al-ghova" or conflicting compound, that is, it consists of two opposite components: delicate warm air (In Persian medicine, element or "Rokn" is something that cannot be decomposed into a smaller component and makes up the basic constituents of all beings, including humans, animals, plants and objects). There are four elements: air, water, fire, and earth. Air is the lightest and most delicate of all elements and earth is the heaviest and thickest. Air is associated with warm and dry temperaments, earth with cold and dry temperaments, fire with dry and warm temperaments, and water with cold and wet temperaments,³⁷ and thick cold earth, which is dominant and bitter in its aroma. According to Persian medicine, the warm component of opium is responsible for the speed with which it burns and the warm feelings that are induced by its consumption. However, because of the delicacy of this component, its effects are fleeting and quickly disappear. On the contrary, the cold effects of the thick earth component are long-lasting. This is why immediately after use, opium causes numbness and clogs skin pores and other organs, and

accumulates warmth in the body, and stimulates its faculties, which makes the body appear warmer and increases appetite. But no matter how it is consumed, opium gradually starts to induce the opposite effects. Gradually, the body becomes weak and lean and the face becomes yellow and pale, because of the decline in body's innate warmth (warmth that attributed to is the nature of the living body, meaning the warmth that appears with the beginning of life and disappears with death),³⁸ spirits and faculties (spirit or "Arwah" refers to substances produced from the vapors of humors; humor is a moist fluid substance extracted from the food in the digestive system; there are four types of humor: blood, phlegm, yellow bile, and black bile). Spirit possesses the properties of delicacy, fluidity, and mobility. Faculties or "Ghova" refer to the powers that trigger the body's functions and mechanisms. There are three types of spirit and faculty in the human body: vital, psychic, and natural,³⁷ especially the vital faculty, makes the body cold and the limbs numb. The permissible oral dose is from one lentil (*Lens culinaris*) to a maximum of one gram.^{29,30} (grain is a unit of measurement of mass and is equivalent to 64.7891 milligrams). This unit is derived from food grains (barley and wheat), the average weight of which was part of the official mass unit from the Bronze Age up to the Renaissance. However, there is no evidence of using real grains for measurement. One carat (mass of a grain of *Ceratonia siliqua*) is equivalent to 4 grains of wheat or 3 grains of barley.³⁹ Since the search of the literature on Persian medicine and relevant databases revealed no instance of measurement based on lentil grains, this seems to be referring to the rough volume of a lentil grain (author's note). Eating 6 grams of opium is lethal and generally eating more than 0.5 gram is impermissible.^{29,30} According to one source, the lethal dose of opium is from 2.25 to 4.5 grams.³¹ It is said that opium can remain unspoiled for up to 50 years provided that it be kept away from heat, cold, humidity, dust, and other spoiling effects.^{29,30}

Opiate is constrictor²⁹ (meaning highly constricting; a drug that keeps substances in the organ by contracting its components and bringing them together),³⁷ sedative^{29,31} (meaning sedation-inducing; with its coldness, dryness, and constricting effect, opium freezes the humors and

closes the pores of the organ, preventing the penetration of psychic spirit, which makes the person numb and immobile. Most sedatives are cold and dry in temperament and suppress the psychic and vital spirits in a way that somewhat blocks the transmission of senses and movement),³⁷ sealant²⁹ (meaning what that causes closure and blockage; a substance that, because of its dryness and concentration or adhesion and viscosity, gradually blocks the pores by which wastes are disposed),⁴⁰ dissolver²⁹ (meaning a substance that, by the force of its warmth, separates the humors from their position to which they are attached and turns them into vapor one by one until there is nothing left),³⁷ and condensator⁴⁰ (meaning a substance that thickens the body's humors).³⁷ It has toxic^{29,30,32,37,40,41} and lethal effects^{29,30} (meaning deadly, because of opposition to the vital spirit and faculty or the ability to alter them in a profoundly negative way),³⁷ and reduces semen.²⁹

It can be used to treat pain and insomnia,^{29,31} also combined with other traditional medicines to preserve their effects for many years.⁴² According to Persian medicine, opium, if used repeatedly, will leave many adverse effects on the body. Some of the consequences of opium consumption and their cure according to Persian medicine are listed in table 1. Opium use decreases blood production and therefore, weakens the body's nutrition. With the weakening of the body, nutrition and growth also decrease, resulting in even further body weakness.^{30,33} Low amounts of opium eaten before meals do not harm the stomach. Opium that is eaten after a meal will have reduced effects, thus forcing the addict to consume more of the substance. In the case of addiction to high amounts of opium, it should be eaten after meals to lessen its toxic effect on the stomach.³³ Sapphire is a precious rock naturally occurring in red and infrequently in other colors and is the hardest rock after diamond. Tonics or "Mofarrahat" are drugs that bring joy to the body.⁴³ Moderate sapphire tonic is a remedy for general weakness in the body, strengthens the heart and brain, and alleviates palpitations and heart disease.⁴⁴ Antidote or "Theriac" agrees with the spirit and faculties and innate warmth, and can invigorate them in protecting the body from toxin. It also helps spirit and faculties and innate warmth neutralize the toxins that enter our body every

day. Scholars of traditional medicine have used several different types of "Theriac".³⁷ The animal "Theriac" is extracted from deer, and specifically a rock that is found in their stomach or under their eye. The term absolute animal "Theriac" refers to "Hajar-al-Teis", which is a stone in which the abomasum of an adult mountain goat is placed. This stone is often long, like oak, and it is best to be blackish green and lustrous and layered like an onion. In this case, using either of these alone has greater benefits than using them together.³³ A compound medicine that is tasty, odorous, and invigorating helps in digestion and is refreshing.⁴³ Syrups are prepared by boiling the herbs in water and then dissolving sugar or honey in the broth until it thickens.³⁰ Cold and dry temperament of opium causes tension in the nerves.^{30,34} While having a cold temperament, opium initially causes a high degree of heat which, in case of repeated use, becomes strong enough to cause moisture loss.³³ The most difficult affliction affecting opium users is diarrhea, because they often suffer from a severe type of diarrhea known as liver diarrhea. Also, opium addicts have weak faculties, which make diarrhea more dangerous. Further, this affliction does not appear until the cause is serious, which means that it is difficult to treat the cause.⁴⁵

Another detrimental effect of opium is that its toxicity and coldness reduce the body's innate warmth, to the point that it cannot even maintain the body's moistures. This results in poor condensation of moistures, because of which moistures become diluted and pour in joints and muscles. This is why addiction causes severe joint pain. Moistures also pour in eyes, nose, and throat, causing watery eyes, runny nose, sneezing, and coughing. Dilution and accumulation of moistures in the stomach and intestines also cause abdominal pain and stomach and intestinal irritation. Other negative effects of opium include vertigo, dizziness,³³ sleepiness, poor digestion followed by accumulation of moistures in the stomach,³⁰ bloating, cracking joints, difficult urination,^{30,33} dryness of brain, nose, and mouth, hoarseness,³³ and over-enjoying solitude and avoiding gatherings and company. Opium also causes yellow face tone, frequent melancholy, excessive fearfulness and apprehension, weakening of the sense of sight, smell, and taste, and weakness of kidneys and bladder.^{30,33} Because

of these effects, it also causes frequent yawning, insomnia, dull senses, gloominess, laziness in all matters, and decreased physical strength.³⁰ If frequently used, it also decreases appetite and libido.³² The remedies of these effects of opium are gondebidadstar (beaver testicles), saffron (*Crocus sativus*), cinnamon (*Cinnamomum verum*), silver spurge (*Euphorbia rigida*), ginger (*Zingiber officinale*), zedoary (*Curcuma zedoaria*), black pepper (*Piper nigrum*), and valerian (*Valeriana officinalis*).²⁹

Discussion

Many Islamic jurists have declared opium "haram" (religiously forbidden),³³ like wine,⁴⁶ arguing that it induces an unnatural state of mind and clouds the reasoning and can be equated with cannabis.³³ Opium is a narcotic substance with a long history of use as a medicine, but creates addiction in people who use it frequently. In the early 16th century, at the onset of the Safavid era in Iran, opium addiction in this country was restricted to people belonging to the upper classes of society or affiliated with these classes. But the 17th century saw a major shift in opiate use in Iranian society from medical use to non-medical use.⁴⁷ During that period, opium was being used in combination with other Persian medicine and the medicines that consisted of opium (Afioon) and another medicinal substance were being called "Afioonieh". These medicines were being used not only to treat many simple ailments including coughing²⁹ and diarrhea,⁴⁸ but also to relieve pain in any organ^{33,49} and could be used orally or as a topical cream.³³ In the reference books of modern pharmacology and psychiatry, opioids have been described as being analgesic, antitussive, anti-diarrhea, and narcotic and alleviating acute pulmonary edema.⁵⁰⁻⁵⁵

Of the five clinical effects cited for opium in modern medicine, all except the effect on acute pulmonary edema have been correctly diagnosed in Persian medicine (opioids alleviate acute pulmonary edema indirectly by sedating the patient).⁴⁸ While recognizing the many consequences of opium addiction, the reference books of Persian medicine have also acknowledged the therapeutic uses of opium as a medicine, provided that it be used carefully and in limited amounts, some even referred to it as theriac, meaning antidote.^{28-30,32,33,40,45,56}

Table 1. Consequences of opium consumption and their causes and cures

Harm	Cause	Treatment method	Medication (only one)
Weakening of the body's main organs (Organs that are vital for survival: heart, brain, liver, and gonads (testicles or ovaries) ³⁶ , spirits, faculties, and warmth ^{30,33}	Decreased blood production because of conflict between opium and blood humor ^{30,33}	Reducing opium intake as much as possible ^{30,33} Strengthening organs, spirits, and faculties with supplements and tonics ^{30,33} Observing the time of opioid use (whether it is used before or after meals) ³³ Using yellow-bile excretion substances (Medications that remove yellow bile from the body, such as <i>Descurainia sophia</i> , <i>Ziziphus</i> , and <i>Cordia myxa</i> . ³³	Moderate sapphire tonic ^{30,33} People over 40: animal antidote ^{30,33} or zedoary (<i>Curcuma zedoaria</i>) ground with rose water and <i>Echium amoenum</i> extract ³⁰ Jovareh of Agarwood (<i>Aquilaria agallocha</i> Roxb), ^{31,34} <i>Ambra grisea</i> , or silkworm (<i>Bombyx mori</i>) ³⁰ Syrup of <i>Aquilaria agallocha</i> , ^{30,33} <i>Bombyx mori</i> , or <i>Echium amoenum</i> ³⁰
Feelings of contraction and burning in muscles and nerves ^{30,33}	Cold and dry temperament of opium ^{30,33}	Before occurrence: using refreshing tonics and avoiding moisture and vapor-inducing foods ^{30,33} (Foods that are smelly and cause bad breath, ⁴³ such as turnips, onions and leeks. ³³ After occurrence: reducing food intake ^{30,33}	Mixing opium with <i>gondebidastar</i> (beaver testicles) ^{30,33} A syrup consisting of extracts of <i>Echium amoenum</i> and <i>Melissa officinalis</i> ^{30,33} Avoiding the intake of cucumber, carrot, turnip, onion, leek, and other vegetables ³⁰
Muscle and tissue degradation ^{30,33}	Nerve fusion and reduction of body moisture because of opium heat ³³	Moisture-inducing foods and drinks ^{30,33} Mixing opium with heart-strengthening supplements and tonics ^{30,33} Continuous moisturizing bath ^{30,33} Relaxation ^{30,33}	
Slimming ^{30,33}	Melting of the body because of opium heat ³³	Using fattening foods that do not close the body's tissue pores and avoiding foods that do so, as it is difficult to treat ³³	
Decreased comprehension and reasoning power and weakening of other faculties ^{30,33}	Loss of senses and filling of the brain with gastric vapors due to poor digestion ³³	Remedies of opium ^{30,33} Studying or engaging in thought-provoking activities after the decline of the opium effect until regaining normal thinking power ³³ Engaging in physical activity with the onset of opium effect ³³ Precise thinking activities should be done at the end of the opioid effect ³³	Saffron (<i>Crocus sativus</i>) Valerian (<i>Valeriana officinalis</i>) Cinnamon (<i>Cinnamomum verum</i>) Clove (<i>Syzygium aromaticum</i>) Green cardamom (<i>Elettaria cardamomum</i>) Nutmeg plant (<i>Myristica fragrans</i>) Agarwood (<i>Aquilaria agallocha</i> Roxb) ^{30,33}
Hearing loss ^{30,33}	Condensation and reduction of spirit ³³ Rise of vapors from the stomach to the brain because of poor digestion ³³	Inserting medicine-impregnated rolled fabric into the ear ^{30,33}	Using a fabric (cotton or gas) placed into horseradish oil, zedoary, and bitter almond oil ground with rosewater ^{30,33}

Table 1. Consequences of opium consumption and their causes and cures (continue)

Harm	Cause	Treatment method	Medication (only one)
Irritability ^{30,33}	Change and decline of temperament ³³	Reducing food intake and countering the drying of the brain with moisture-inducing foods and drinks ³³ Engaging with other people while the opium effect is still in the body ³³ Avoiding people, especially those who cause irritation, when the opium effect is diminished ³³	
Weakening of the stomach ^{30,33}	Cold and dry temperament of opium ³³	Rubbing oil over the stomach ^{30,33} Using stomach-strengthening supplements ^{30,33}	Mastic (<i>Pistacia lentiscus</i>) oil, frankincense (<i>Boswellia sacra</i>) oil, zedoary (<i>Curcuma zedoaria</i>) oil, or bitter ginger (<i>Zingiber zerumbet</i>) oil ^{30,33}
Nausea ^{30,33}	Overconsumption or consumption after a meal ^{30,33} Pouring of nauseating humors into the stomach ^{30,33} Not using opium at the right time ³³	Strengthening the stomach to prevent humors from pouring in ^{30,33}	Sandalwood (<i>Santalum album</i>) syrup Lemon (<i>Citrus limon</i>) syrup Sour grape (<i>Vitis vinifera</i>) syrup Pomegranate (<i>Punica granatum</i>) peppermint (<i>Mentha piperita</i>) syrup ^{30,33} Jovareh made with bergamot (<i>Citrus bergamia</i>) peel, mastic, agarwood, and juice of warty-leaved rhubarb (<i>Rheum ribes</i>), sour grape, or barberry fruit (<i>Berberis vulgaris</i>) Salty cheese, or lemon juice, or verjuice or onion rings and dried peppermint with bread to prevent retching up from bile and stomach weakness ^{30,33}
Diarrhea ^{30,33}	Weakness of the liver due to poor digestion caused by eating opium after meals. This causes the nutrients that have long remained in the stomach to go to the liver before excretion and their moisture to not be absorbed by the liver. The signs of this are the whiteness of stool and the absence of bowel sounds ^{30,33}	Strengthening and clearing the liver ^{30,33}	The best treatment is using Chinese rhubarb (<i>Rheum Palmatum</i>) with diarrhea-preventing spices ^{30,34} such as tablets of barberry root, camphorwood (<i>Cinnamomum camphora</i>), and rose (<i>Rosa damascene</i>) ³⁰

Table 1. Consequences of opium consumption and their causes and cures (continue)

Harm	Cause	Treatment method	Medication (only one)
Constipation ^{30,33}	Cold and dry temperament of opium ³³	Using laxatives ^{30,33}	<p>Fig fruit (<i>Ficus carica</i>) soaked in water and honey after fasting (10 small figs or 8 medium figs; at least 5 should be eaten)^{30,33}</p> <p>Peeled sesame (<i>Sesamum indicum</i>) with dates (<i>Phoenix dactylifera</i>) is a mild laxative that does not irritate the body^{30,33}</p> <p>A mixture of milk, honey, and gaz-angebin (<i>Cyamophila astragalicola</i>) is both laxative and sex drive enhancer</p> <p>Oily broths cooked with rice (<i>Oryza sativa</i>), lentils (<i>Lens culinaris</i>), or barley (<i>Hordeum vulgare</i>) and vegetables^{30,33}</p> <p>Reshteh broth</p> <p>Syrup of wood violet (<i>Viola odorata</i>) with wood violet pulp if more laxation is needed^{30,34}</p> <p>If other solutions are unsuccessful, a mixture of 0.5 g wood violet, 0.5 g senna (<i>Cassia angustifolia</i>), and 0.13 g scammony (<i>Convolvulus scammonia</i>) can be eaten. It is also recommended to drink 45 g of wood violet syrup dissolved in rose water and eat "Nokhodab"^{30,33}</p>

But according to some of these scholars, calling opium (Afioon) a "Theriac" is an erroneous terminological substitution, because although opium initially invigorates the body, unlike the original "Theriac" which reinforces the body's innate warmth, spirits, and faculties to the extent that it becomes protected against ailment, it contains strong toxicity and coldness because of which opium addiction progressively weakens spirits, blood, and other sources of warmth in the body. As the addiction progresses, this weakening of spirits continues and ultimately becomes so severe that there is not enough spirit to be dispersed in the entire body, and this results in poor faculty (like a small fire that cannot heat a vast room). Afterward, the person cannot govern his functions as he should, because most actions are dependent on warmth, and the person loses his desire for movement and sanguinity.³³

Opium is one of the toxins that have a general effect upon reaching the body. In other words, after the absorption of opium, its effects appear in the whole body rather than remaining limited to intestinal problems such as irritation and swelling.²⁸ Given the harmful effects of opium addiction on spirits and faculties, the repeated use of opium, disregarding circumstances and dosage of use, can harm the entire body and even lead to fatality.³⁰ The cases of fatality due to opium addiction are themselves sufficient evidence of its harmful effects. Anyone who continually pursues euphoria by increasing opium use not only weakens his body but also gradually loses the ability to reach that euphoria. On the contrary, committing to gradually reduce the amount and frequency of opium use can result in better euphoria without the decline in body strength and appetite.³³ Here, it should be noted that none of the reviewed sources of Persian medicine has mentioned opium consumption by smoking.^{28-31,33,40,45,56}

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Also, analogous to today's situation where drugs are commonly diluted with toxic substances such as lead,²¹ these sources have mentioned that, considering the high demand for opium and its high price, opium trade is susceptible to underhanded practices such as dilution or mixing with other substances, because these practices rarely change the taste and color of the opium and the resulting change in effectiveness is difficult to notice or even unnoticeable.³³

Conclusion

This study aimed to review the centuries-old viewpoints of the scholars of Persian medicine on the therapeutic uses and harms of opium and demonstrate the need to pay more attention to the knowledge hidden in this medicine about disease prevention and treatment and benefits and harms of natural substances based on hundreds of years' worth of experience. The authors hope that this work will encourage more extensive studies on opioid addiction, which is indeed one of the major health problems of modern life, and undertaking of more effective steps toward alleviating the consequences of opium addiction and improving the quality of life of opium addicts with the help of practical health instructions provided in Persian medicine.

Conflict of Interests

The Authors have no conflict of interest.

Acknowledgements

We thank the reviewers for their valuable comments.

Authors' Contribution

MK, designed the article and carried out the searches and preliminary screening of references and extracted data and wrote the final report. MM, wrote the final report and checked the data extraction. Other authors approved the text.

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عوارض سوء مصرف تریاک و درمان آن‌ها از دیدگاه طب ایرانی: یک مطالعه مروری

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مقاله مروری

چکیده

مقدمه: اعتیاد به مواد مخدر، یکی از مسایل مهم بهداشتی در جوامع مدرن انسانی می‌باشد. اولین شواهد تاریخی استفاده از تریاک را می‌توان در نوشته‌های تئوفراستوس در قرن سوم قبل از میلاد پیدا کرد. از آن زمان، مصرف و سوء مصرف تریاک در همه نقاط جهان و به ویژه کشورهای شرقی گسترش یافته بود. پژوهش حاضر با هدف بررسی عوارض مصرف تریاک و درمان آن بر اساس طب ایرانی انجام شد.

روش‌ها: در این مطالعه مروری روایی، منابع اصلی طب ایرانی و بانک‌های اطلاعاتی پزشکی مدرن مانند PubMed، Google Scholar، PsycINFO، آکادمی علوم پزشکی آمریکا و دفتر مواد مخدر و جرم سازمان ملل با استفاده از کلمات کلیدی مربوط جستجو گردید.

یافته‌ها: در طب ایرانی، معادل فارسی کلمه تریاک، افیون است که به شیر «خشخاش» یا *Papaver somniferum* اشاره می‌کند و به طور سنتی به عنوان یک داروی تفریحی و آرام‌بخش استفاده می‌شده است. مصرف مواد افیونی می‌تواند منجر به بروز اضطراب اجتماعی و روانی، تخریب ماهیچه‌ها و بافت‌ها، تحریک‌پذیری، ضعف معده، از بین رفتن نرمی پوست و تغییر در ویژگی‌های صورت شود.

نتیجه‌گیری: اعتیاد به تریاک به طور کلی برای قوای بدن مضر است. استفاده مکرر از تریاک با توجه به شرایط و دز مصرف و بدون استفاده هم‌زمان از مصلحات آن، می‌تواند به کل بدن آسیب برساند و حتی منجر به مرگ شود.

واژگان کلیدی: طب سنتی، تریاک، پادزهرها، خواب‌آورها و آرام‌بخش‌ها

ارجاع: کمالی محدثه، تاج‌الدینی هاله، مهربانی مهرزاد، مقدری مسعود. عوارض سوء مصرف تریاک و درمان آن از دیدگاه طب ایرانی: یک مطالعه

مروری. مجله اعتیاد و سلامت ۱۳۹۸؛ ۱۲ (۱): ۴۶-۵۷

تاریخ پذیرش: ۱۳۹۸/۸/۴

تاریخ دریافت: ۱۳۹۸/۵/۳۰

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