

Health benefits of pendant from the viewpoint of Persian medicine

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Author contributions

Armaghan Sadat Keyhanmehr, Fatemeh Eghbalian and Sepideh Kolouri wrote parts of the manuscript. Ali Ghobadi did conceptualization and methodology. Armaghan Sadat Keyhanmehr and Fatemeh Eghbalian did the literature research and prepared the data for analysis. Majid Dadmehr reviewed and edited the manuscript. All authors read and approved the final manuscript.

Competing interests

The authors declare no conflicts of interest.

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Abbreviations

PM: Persian medicine; CAM: complementary and alternative medicine.

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Abstract

Background: Reviewing historical evidence in the various schools of traditional medicine shows that numerous methods have been used to maintain human good health and treatment of diseases. Persian medicine (PM) scholars have been employed different methods to prescribe medications, which can be classified into two main groups: internal uses, including oral, parenteral, and anal, and also external uses such as topical, transdermal, and applying pendants. In this study, we aim to introduce some of the therapeutic pendants. **Methods:** We reviewed the most famous PM textbooks and current evidence in relevant databases such as PubMed, Science Direct, Scopus, Google scholar and SID related to the topic. **Results:** In this study, about 100 traditional therapeutic substances were found and finally, thirty-two of them were represented. They were often stones, and some of them were other materials such as metals, gums, and herbs. According to the PM, the utilization of pendants, in addition to cosmetic purposes, has been considered to maintain the health and treatment of some diseases. Therapeutic pendants can be considered as a kind of external medication use in which therapeutic materials are hung on the body surface. The external use of pendants could have curative effects with their close contact to the body surface. **Conclusion:** Pendant therapy may probably be considered as a non-invasive and easy-to-use treatment with unnoticeable side effects that can be utilized along with other therapies.

Keywords: Pendant; Persian medicine; Complementary medicine; Gemstone therapy

Introduction

Humankind has been used various methods to treat diseases since ancient times. Historical evidence shows that Persian medicine (PM) scientists have also been experienced a number of methods to create a therapeutic effect [1]. PM as one of the firstborn schools of medicine has a holistic viewpoint to the health care, prevention and treatment of diseases with several thousand years of history [2]. According to the PM manuscripts, medicaments with herbal, animal and mineral origin have been practiced in solid, semisolid, liquid and gaseous forms. PM scholars have mentioned different types of dosage forms for these natural medicaments in their pharmacopeias and medical textbooks. They have been applied in desired doses by oral, topical, nasal, parenteral, vaginal and rectal routes of administration for related therapeutic purposes [1, 3].

Oral administration is one of the most common stated routes of administration with systemic effects [3]. However, there are other routes of administration without direct ingestion such as aromatherapy [4]. One of the common forms of external medicinal use is wearing or hanging of mineral (stones), plants, gums, etc. that can be utilized along with other therapies. This kind of drug delivery is called "*Tāliq*" in Arabic and "*Avizeh*" in Persian, which is equivalent of pendant in the current nomenclature. They were employed as necklace, earring, bracelet, and ring either alone or in combination with other herbal, animal and mineral ingredients in the treatment of a wide variety of diseases. In order to take advantage of their beneficial effects in some cases it is enough to put on the surface of a sick or damaged organ or to be placed only in the person's living environment [5-8].

Historical evidence from ancient civilizations shows several thousand years' history of using stones for releasing mental, physical and spiritual problems through balancing emotional and spiritual aspects of the body to enhance the health. Sometimes stones were used to protect people from disasters such as wars or even natural disasters [9, 10].

The books "*Al-Jamāhīr fī Ma'rīfat al-Jawāhīr*" (The Book Most Comprehensive in Knowledge on Precious Stones) by Abu Rayhān Muḥammad ibn Aḥmad al-Bīrūnī and "*Tansūkh nāmeḥ Ilkhānī*" by Nasīr al-Dīn Muḥammad ibn Muḥammad Ṭūsī are the two valuable ancient references of mineralogy and gemology in Iran, which demonstrate the interest of ancient Iranian scholars to gemstones and their Health benefits and therapeutic properties [11, 12]. Gemstone therapy is a well-known, non-invasive and easy-to-use complementary and alternative medicine (CAM) practice with unnoticeable side effects that includes wearing precious and semi-precious stones in order to improving individual's physical and emotional health. Nowadays, there is a common belief among the people that the use of gemstones is effective in maintaining health and even treating various ailments [13, 14].

To the best of our knowledge, this concept has not been suitably studied from the viewpoint of PM. Considering the tendency of the general population to use CAM for the treatment of diseases and the scattered evidence of the healing effect of gemstone pendants as a complementary medicine, we aimed to introduce the pendants and their health benefits in the PM.

Materials and methods

In this study, we reviewed several main PM textbooks including *Al-Qānūn fī al-Tibb* (the Canon of Medicine) by Avicenna (11th century), *Exīr Azam* by Azam Khān Chishti (19th century), *Khulāsat al-Hikmat* by Aghīlī Shīrāzī (18th century), *Tibb Akbarī*, and *Mīzān al-Tibb*, by Arzānī (late 17th and early 18th century) and the most comprehensive traditional medicine pharmacopeias such as *Makḥzan al-Advyāh* by Aghīlī Shīrāzī and *Qarābādīn Azam* by Azam Khān Chishti to collect data from medieval medical textbooks. The search was performed according to the keywords of "*Tāliq*", "*Avizeh*" and their derivatives. Those medicaments with mineral, plant and animal sources used as pendant were gathered. Then health benefits of

pendants in preventive care and their application in the treatment of diseases of the human body were categorized. Furthermore, electronic databases such as PubMed, Science Direct, Scopus, Google scholar and SID were searched from 7 June 1990 to 26 May 2021 related to the topic. The search terms were "pendant", "gemstone", "stone medicine", or "gemstone therapy" and "health", "disease", "treatment", "herbal medicine", "plant", "herbal", "mineral", "traditional medicine" or "complementary medicine" without narrowing or limiting search items. Relevant publications with available abstracts and titles were reviewed.

Results

From the perspective of PM, health care system is based on three main pillars, including lifestyle modifications, medications, and manual therapies [6, 8]. In PM textbooks, there are different types of dosage forms some of them include oral, topical, nasal, ophthalmic, vaginal and rectal routes [5]. The use of pendants has been considered as one of these methods [5-8, 15]. Pendants had a wide range of uses, including ornamental purposes and to maintain individual's health. Moreover, pendant was a pharmaceutical dosage forms in PM textbooks, which is utilized as a route of administration followed by other treatment strategies for several ailments. PM scholars explained several plant-, animal-, and mineral-derived pendants, which originated from stone, metal, all or part of a plant or animal, gum, and soil [5, 16].

In this study, more than 100 materials (minerals and non-minerals) were found in PM manuscripts, which have also been used as pendants. Then their old and traditional names were matched with the present common names, only 32 of them had a present equivalent name, and among those which were easier to access and use at the present time were selected and declared. Table 1 shows examples of medications were used individually as pendants with their common names, traditional names, and health benefits and therapeutic properties.

Pendants were employed in the form of necklaces, wristbands, earrings, bracelet and ring and armbands. In some cases, it was enough to be placed on a specific part of the body, such as the neck, wrists, thighs, and even held in the hand. Some of them were also hung in human habitats to show their effects on maintaining health or treating disease. The type of pendant and its place in the body are determined based on the expected therapeutic effects. For example, jasper stone when placed on the neck, can be effective for pharyngitis (*Xonāq*), when placed on the left upper chest, it is useful in controlling palpitation. Using it as a pendant near the esophagus and stomach strengthens them (gastric tonic). Pulling jasper around the thighs useful for labor difficulty and can speeds up labor.

There is a belief that jasper stone can help to protect witch craft, evil eyes and lightning strike damages too [5-8, 11, 12, 15, 16].

It has also been noted that the properties of the stones change under certain conditions. For example, if a lodestone is placed in olive oil or milk, its magnetic property is damaged, while washing it with vinegar restores this property [11]. Some criteria have been considered for choosing a gemstone as a pendant. The Items such as being aromatic, having the ability to engrave and even the color of the string used by the gemstone are important factors in choosing a gemstone as a pendant, especially for its therapeutic effects.

Discussion

Nowadays, CAM has become increasingly popular. The high cost of conventional treatments and the failure to achieve optimal healing outcomes in some cases are the two highlighted causes of the general public's tendency toward CAM [17, 18]. Homeopathies, Ayurveda, aromatherapy, acupuncture or gem therapy are some examples of complementary medicine branches [19]. Gemstone therapy as a kind of pendant therapy, is a holistic, non-invasive method in which stones with specific colors and radiations exert certain properties and energies that affect the body's physical and emotional health [20].

Table 1 Examples of pendants and their therapeutic properties in Persian medicine [5–8, 15, 16]

Source of pendant	Common name	Traditional name	Health benefits and therapeutic properties
Mineral/stone	Diamond	<i>Almās</i>	Gastric and cardiac tonic Prevents fear Facilitates normal birth To be useful in the epileptic seizures To be useful in the hot gout
	Lodestone	<i>Hajar ol-miqnāṭis</i>	Improves childbirth pain and difficulty Mind enhancer Improves hand and foot spasm
	Flint	<i>Hajar on-nar/</i> <i>Chaqmaq</i>	To be useful in the labour pain and difficulty
	Peridot	<i>Zabarjad</i>	To be useful in the epilepsy Improves labour difficulty
	Emerald	<i>Zumurrud</i>	To be useful in the epilepsy, hemorrhage, internal ulcers, dysentery, dysuria, pharyngitis or the like, palpitation, psychosis and melancholy, Hematemesis, cardiac tonic , Exhilarant
	Agate	<i>Aqiq</i>	To be useful in the epilepsy, reduces anger and hostility, Exhilarant , Thirst quencher
	Turquoise	<i>Firūzaj</i>	Gastric and cardiac tonic , Prevents fear, Protects from enemy, Prevents from drowning and lightning damage Prevents fear, cardiac tonic, Polisher/detergent, Exhilarant,
	Lapis lazuli	<i>Lāzivard /Lājivard</i>	Astringent, Elimination of black bile associated diseases e.g., sorrow and sadness, Relives horror and fear, emmenagogue skin lightener
	Ruby	<i>Yāqūt</i>	Gastric and cardiac tonic, to be useful in the epilepsy, obsession, palpitations and air pollution, evil eye protector
	Jasper	<i>Hajar ol-bashf/Yashm</i>	Effective on pharyngitis or the like, palpitations, Gastric tonic, useful for labor difficulty, protects of witch crafts, evil eyes and lightning damages
Gum	Amber	<i>Kahrba/ Kahrubay</i>	Prevents epistaxis, fear, plague, jaundice and miscarriage Gastric and cardiac tonic
Mineral /metal	Iron	<i>Hadid</i>	Prevents cholera and plague
	Gold	<i>Zahab/Talā</i>	Prevents fear (very useful) and cold gout Cardiac tonic
	Silver	<i>Fizzah/ Sim/ Nuqrih</i>	Gastric tonic
Animal/Marine invertebrate	Coral	<i>Marjān</i>	To be useful in the cold gout Beneficial for all diseases Prevents night terrors in children

Common name	Traditional name	Scientific name	Health benefits and therapeutic properties
Sowbread/ European cyclamen	<i>Bakhūr Maryam</i>	<i>Cyclamen europaeum</i> L.	Useful for labor difficulty
Saffron crocus, or autumn crocus	<i>Za'farān</i>	<i>Corcus sativus</i> L.	Useful for labour difficulty and placental expulsion
Pyrethrum	<i>Āqirqirhā</i>	<i>Anacyclus pyrethrum</i> (L.) Lag.	To be useful in the pediatric epilepsy
Common peony	<i>Fāwāniyā</i>	<i>Paeonia officinalis</i> L.	To be useful in the headaches, all types of
Coriander	<i>Kuzburah/ Geshniz</i>	<i>Coriandrum Sativum</i> L.	To be useful in the labour progression
Common Plantain	<i>Lisan ol-Ḥamal</i>	<i>Plantago major</i> L.	Effective on pharyngitis or the like (suspension of plant
Asparagus officinalis	<i>Halyūn</i>	<i>Asparagus officinalis</i> L.	Toothache reliever
Celery	<i>Karafs</i>	<i>Apium graveolens</i> L.	To be useful in toothache (suspension of plant roots on
Sumac	<i>Sumāq</i>	<i>Rhus coriaria</i> L.	Prevents bleeding
Pink Arnebia	<i>Abuxalsā</i>	<i>Arnebia euchroma</i> (Royle) I.M.Johnst.	Plant root suspension can prevent bug bites
henbane, black henbane, or stinking	<i>Banj/Bazr ol-Banj</i>	<i>Hyoscyamus niger</i> L.	Prevents pregnancy (in combination with other
Dock	<i>Ḥummāz</i>	<i>Rumex patientia</i> L.	Effective on pharyngitis or the like (suspension of plant
Colocynth	<i>Ḥanzal</i>	<i>Citrullus colocynthis</i> (L.) Schrad.	Effective on hydrocele (suspension of plant roots on
Scorpion Senna/ Alacranera Comun	<i>Darūnaj</i>	<i>Doronicum scorpioides</i>	To be useful in the labour pain
Bitter ginger	<i>Zurunbād</i>	<i>Zingiber zerumbet</i> (L.) Roscoe ex Sm.	Aphrodisiac (suspension of plant on the waist and lower
Olive	<i>Zaytūn</i>	<i>Olea europaea</i> L.	Effective for scorpion venom (suspension of plant roots)
Watling Street thistle	<i>Qaras'aneh</i>	<i>Eryngium campestre</i> L.	Housefly repellent Assimilator of swelling

The placement of these stones in specific areas of the body is important for exhibiting their therapeutic effects, as it is essential for Chakra therapy to place stones in the place of the chakra [14]. Although a great deal of information about stone therapy is available on different websites, evidence-based medicine on its therapeutic effects is limited and there are few reliable clinical trials on this

subject. Natural stones are advertised as "healing tools" and this is effective in favoring their use with the hope of healing. Therefore, when people around the world use healing stones, the placebo effect can be seen [21].

In gem therapy as another form of pendant therapy, gems such as emerald could be effective for those ailments healing. In contrast,

diseases such as diabetes, cancer, hepatitis and multiple sclerosis require increasing energy and heat induction in their treatment process, and then gemstones such as rubies and diamonds may be useful [14].

Although, there is not enough scientific evidence that shows the relationship between gemstones chemical compositions or their colors and the healing effects of them on a particular ailment, gem therapy has still remained popular in many countries such as Pakistan. They use these stones through different methods including in the form of pendants such as wearing necklaces and earrings, as well as other ones such as wearing rings, wristbands and arm bands [14].

According to the PM (as one of the branches of CAM), the use of pendants is considered a preventive care and treatment strategy as well. In addition, various types of pendants have been used for decorative purposes among the people. In this treatment, pendants with animal, plant and mineral origin are in contact with a part of the body's surface for a certain period of time [5, 6].

Some minerals, whether taken orally or in the form of a pendant, have therapeutic effects. For example, the use of lapis lazuli in combination with oral medications can have many therapeutic effects, including strengthening the heart. Its cardiac tonic effect can also be seen when wearing lapis lazuli as a necklace. Some of the pendants are also fragrant, so their aromatic properties are used for permanent and long-lasting therapeutic effects.

Some of these materials have a special effect only in the form of pendants. For example, *Coriandrum Sativum* L. (coriander) can only be useful in the labour progression if it is tied around the thigh. This therapeutic effect is not mentioned in other methods of using this plant. Moreover, in PM textbooks it is mentioned that some pendants should be placed on the target organ such as the heart and in close contact with the organ to show the desired therapeutic effect. Therefore, therapeutic properties of these drugs appear only to be present as a pendant and in close contact with the skin [5–8, 15].

Depending on the disease and the purpose of the therapist, the stones are placed on specific part of the body surface such as energy channels or chakras [14].

Due to the lack of scientific papers and clinical trials in the field of pendant therapy, our findings represented an attempt to provide a basis for more research about pendants beneficial in medicine, pharmacy and even medical engineering. In spite of the abundance stone mines in our country Iran, it is better to know the healing properties of these stones and utilize them in the treatment of diseases. Another important feature of this article was the introduction of the other therapeutic pendants such as metals, plants, gums and animals' material which showed that therapeutic pendants are not limited to the stones.

One of the limitations of our study was that many of the materials we found in PM textbooks were named with their old Persian names, and we did not find their today's name equivalent, the other limitation was that some of the materials we found in the ancient texts were unconventional in present-day use so we omitted them and declared only the materials that had present equivalent names.

Conclusion

According to the findings, it seems that the use of therapeutic pendants such as stone, herb and metal is a method of administering medications that affects externally. Applying this method has its own rules, such as choosing the right material and the right place to hang or put to reaching its beneficial effects in improving the health of patients along with the other treatment methods.

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