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History and Traditional uses of *TiryAQ* (Theriac): An important formulation in Unani medicine

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ABSTRACT

The history of *TiryAQ* is around 2000 years old and, since ancient times, has been regarded as a universal antidote. It was a complex compound consisting of many ingredients, originating as a cure for the bite of poisonous wild animals, mad dogs, or wild beasts. *TiryAQ* was not a usual antidote; it was not developed to cure or prevent a particular disease. It was a multi-medicine to protect against all poisons and treat different conditions, such as chronic cough, stomach-ache, asthma, chest pain, fever, colic, seizures, diarrhoea, and urine retention. The belief that *TiryAQ* could protect individuals from poisons and various maladies persisted well into the modern era, only gradually being dispelled by the progress of Western medicine founded on scientific principles. *TiryAQ* was taken off most formularies, although now it survived in India and a few European cities.

Keywords: *TiryAQ*; Theriac; Antidote; Mithridate; Andromachus; Unani medicine.

1. INTRODUCTION

Since time immemorial, human beings have tried to discover or create a universal antidote that could protect against all poisons, whether derived from plants, animals, or minerals. Such therapy was a particular preoccupation of powerful rulers and the affluent; fear of poisoning and a desire to purchase antidote motivated both groups [1]. Among speakers of Arabic, the elusive elixir came to as a "*TiryAQ/Theriac*" (English: treacle, Latin: theriaca; French: thériaque, Unani: *TiryAQ*), a word derived from the ancient Greek word *thēr*; "wild animal" or *theria/theriakos*; "wild beasts" [1-3]. According to some authors, the word theriac is derived from the verse of *Nicandre of Colophon*, which is referred to as Theriaca. In Old English, called treacle, meaning the golden syrup that is drained during sugar refining [4]. *TiryAQ* refers to a combination of drugs, originating as a cure for the bite of poisonous wild animals, mad dogs, or wild beasts [2, 4, 5]. However, the *TiryAQ* was not a usual antidote; it was not developed to cure or prevent a particular disease. It was a multi-medicine to protect against all poisons and treat different conditions, such as chronic cough, stomach-ache, asthma, chest pain, fever, colic, seizures, diarrhoea, and urine retention [1, 3]. The primary role of *TiryAQ* has to neutralize the effects of toxic substances on the body. It could be used in reaction to an event of poisoning and routinely to create 'immunity,' and it was only a quick step from inventing a general solution to declaring a cure-all [6].

2. MATERIAL AND METHODS

The information on *TiryAQ* was obtained from online databases, including PubMed, Google Scholar, Science Direct, and a library search was conducted from classical Unani textbooks. The keywords used for the search were: *TiryAQ*, theriac, theriaca, treacle. This review mainly focuses on the history of *TiryAQ* and its traditional uses and provides a platform for future research perspectives.

3. HISTORY OF *TIRYAQ* / THERIAC

The notion of a universal antidote to counteract all venoms was ancient and can be found in many medical treatises [7]. In Greek mythology, the goddess of healing, *Panacea*, was said to have a potion that cured any illness. The quest for the cure-all remedy would continue throughout ancient times as physicians tried out innumerable cures in their patients' regular care, particularly in desperate circumstances. In the ancient world, poisoning was fairly common and the pursuit of a toxin-protective compound led to fame [2]. The invention of *TiryAQ* is also attributed by many to Mithridates VI Eupator, king of Pontus in Asia Minor (120-63 B.C.). It was a skilful ruler but a monster of cruelty, who, living in such a fear of being poisoned, experimented extensively with poisons and their antidotes on condemned criminals and slaves, and hoped to the creation of a universal antidote. Finally, he created a universal antidote called the *mithridatium* or *mithridatum* "mother of all antidotes" [1, 4, 5]. It contained around forty ingredients, such as opium, saffron, castor, myrrh, cinnamon, ginger, and was thought to protect against all animal venom and other toxins [1, 2]. He tried to vaccinate himself by drinking a daily dose of poison and an antidote to protect himself

against the fear of poisoning [7]. In the first century AD, Nero's physician *Andromachus* took a great deal of *mithridatium* ingredients and produced a new antidote [8]. *Andromachus* came from the island of Crete, where herbs were gathered by "botanical persons" in the service of the Emperor and placed in knitted pots, which were sent not only to Rome but also to other countries. The vast knowledge of botany by *Andromachus* helped him "provide the requisite medicines for mankind" [2]. He retained almost the majority of the simple ones, such as the opium, but about a dozen new simples have been added. The most important alteration of *Andromachus* to *Mithridatium* antidote was the replacement of an African lizard, called skink, for the viper, and create a new antidote: the *Tiryaaq/Thearic* [3]. He named his medication "*Tranquility*." It was thought to be effective against snakes and other poisonous animal bites. It was a general antidote to venoms and contamination and was used as a curative and preventive for all sorts of general ailments [8]. *Andromachus* says that his *Tiryaaq* can not only be used for toxic animal bites, but also used in asthma, colic, dropsy, inflammation, and plague. *Andromachus Tiryaaq's* performance elevated him to the dignity of chief physician and for centuries preparation has enjoyed a considerable reputation [2]. The two recipes differed to some extent in the kind and quantity of plant drugs and the opium content. Among its sixty-odd ingredients, *Tiryaaq* contained *Bitumen* and *Lemnian earth*, all lacking in *mithridatium*, while lizard was a distinctive ingredient in *mithridatium*; both remedies had castoreum, a substance derived from the perineal glands of the beaver [9]. The initial reference of *Tiryaaq* can be found in the educative poems from the second century B.C., "*Theriaca et Alexipharmaca*" by the Greek grammarian, poet, and physician *Nicander of Colophon*, who defined several toxins and their antidotes from animal bites [2]. One of the earliest *Tiryaaq* formulations against venom bites was engraved on a stone in the *Temple of Asclepius* on Cos Island. According to *Pliny* (23-79 AD) and *Jalinoos* (*Galen*) (131-c.201 A.D.); it included thyme, sweet myrrh, aniseed, fennel, and parsley [2, 8]. In the books "*De Antidotis I*," "*De Antidotis II*," and "*De Theriaca ad Pisonem*," *Jalinoos* inscribed about several *Tiryaaq* compounds, but his favourite was the "*Tiryaaq of Andromachus*." This preparation was compounded by *Jalinoos* for the Emperor, '*Marcus Aurelius Antoninus*' (121-80), who has taken a standard dose for poison safety and wellbeing. After *Jalinoos*, medicine entered a time of minimal advancement, and the "*Tiryaaq of Andromachus*" with his blessing retained a privileged *Tiryaaq* status. The fundamental formula as it existed over the centuries was very consistent [8]. "*Tiryaaq of Andromachus*" was required to mature for years and was administered orally as a potion or topically in plaster. *Jalinoos* believed that his *Tiryaaq* had drawn poisons like a cupping glass and could divide the tissue of the abscess faster than the scalpel [2]. *Jalinoos* did not just administer his *Tiryaaq* on humans, but he also tested with it on animals. In "*De Theriaca ad Pisonem*," he explains how he took the roosters and split them into two groups: in one group, he gave the *Tiryaaq*, and in the other group, he did not. Then he made contact with the snakes of both classes; he noticed that immediately after being bitten, the roosters who had not been given the *Tiryaaq* died, while those who had been given the *Tiryaaq* survived. In addition, he points out that this experiment may be used in situations where someone needs to make sure that a *Tiryaaq* is in its natural state or has been adulterated. In addition to this work, *Jalinoos* wrote about the effects of his *Tiryaaq* on individual patients. In one passage in "*De Theriaca ad Pisonem*," he provides an illuminating justification of the use of his *Tiryaaq* to treat the jaundice caused by snakebite [2, 7]. In mediaeval Europe, *Tiryaaq*'s preparations appeared in the '*Lorscher Arzneibuch*' as early as the eighth century [7]. Initially formulated counter poisons, both *Tiryaaq* and *Mithridatium*, have been commonly

used as panaceas in the early modern period [7]. In the 12th century, the most famous and expensive *Tiryaaq* in Europe was Venice (the capital of northern Italy). Venice had been considered to have the first standard of "*Andromachus Tiryaaq*." In 1602, *George Bartisch* (1535–1607), the popular German ophthalmologist, published a booklet on Venice's *Tiryaaq of Andromachus*, a well-known cure-all. Every year, a religious and medical festival was held there to prepare the authentic *Tiryaaq*. When prepared, the mixture was a very soupy combination and placed in a cool, dry place to mature. Seven years was a typical time to wait until *Tiryaaq* was used [8]. Subsequently, various forms of *Tiryaaq* were developed in antiquity, but *Andromachus* may have invented the most celebrated [2]. This popular electarium became a patent medicine in the Middle Ages and entered legal dispensaries and pharmacopoeias [5]. It is noticeable also in the 19th century French and German pharmacopoeias [2]. *Tiryaaq* was taken off most formularies, although now it survived in India and a few European cities [8].

4. TRADITIONAL USES

The history of *Tiryaaq* is around 2000 years old and, since ancient times, has been regarded as a universal antidote [8]. By the time the entire region adopted Islam, *Tiryaaq* was part of a long-standing Persian medical tradition, and physicians used them [1]. The passage of knowledge on the *Tiryaaq* of the European culture to Islamic culture has come true quite early by Alexandria, where many doctors were interested in poisons [5]. *Tiryaaq*, regarded as a universal cure since ancient times, was a complex compound made up of several ingredients, wherein the substances that give the name to the combination represent the primary constituents of each *Tiryaaq* and are mixed with a plethora of other elements. All the *Tiryaaq* share similar properties and are mainly antidotes to poisons and treat diseases [7, 10]. The *Tiryaaq* is appropriate for all things that the great *Tiryaaq* is chiefly recommended in helping the disorders of the liver, kidney, stomach, intestines, gout, colic, bladder, skin, thinness, and falling of hair, and to counteract a variety of poisons and infections resulting from animal bites [1, 11]. *Jalinoos* writes that it is also useful against chronic headaches, dizziness, and hearing loss. *Ibn Sina* (*Avicenna*) (980-1037) appears to have believed that the *Tiryaaq* proved effective in counteracting poisons and can improve sensual perception, increase sexual desire, stop bleeding, facilitate the kidneys and bladder's work, and stimulate the appetite [12, 5].

Ismail Jurjāni (*Zayn al-Din Gorgani*) (1040–1136) repeatedly referred to various types of *Tiryaaq* and their medical properties in the eastern Muslim world. In *Zakhira Khwarazmshahi* (*Thesaurus of the Shah of Khwarazm*), he described *Tiryaaq* as having the power to treat various poisons and relieve all pain, plague, epilepsy, vertigo, toothache. Sometimes it strengthens the organ of taste. It also helps those who have difficulty breathing as a thick phlegm builds up in the hollows of the lungs and prevents a man from breathing [11, 13]. In the plague, *Tiryaaq* was used as both a preventive and therapeutic drug [7]. It nobly cures the jaundice caused by a liver-related disease. It breaks down kidney stones and removes the earthy and foul matter; it heals bladder wounds and cures dyspepsia and weakness in the guts and warms the stomach body and strengthens it [13]. *Abū Bakr Muhammad ibn Zakariyyā al-Rāzī* (854–925) cited *Jalinoos* that a *Tiryaaq* may counteract snake venom and all other poisons. *Abū Rayhan Birūni* (973–1050) made many references to the properties and types of *Tiryaaq* [1]. *William Turner*, in his '*Book of Wines*' quoting *Jalinoos*, that with the use of *Tiryaaq*, I have most times helped those that had the disease called leprosy. It is suitable for the body and the mind [11].

Abū Marwān ‘Abd al-Malik ibn Zuhr (Avenzoar) (1094–1162) wrote of making a *Tiryaq* for Al-Andalus’s ruler that included saffron. In 1360, Al-Kuhin al-‘Attar al-Isra’ili al-Haruni, described a new *Tiryaq* in a “*Minhaj al-Dukkan wa-Dustur al-A’yan fi’l-tibb wa’l-saydalah*” (The Management of [Apothecary] and Regulations of Important Matters in Medicine and Pharmaceutics), consisting of 86 components. When dissolved in water and taken with honey, he claimed this mixture counteracted poisons, treating respiratory, stomach conditions, chest pains, and colic [1]. Abū Al-Walīd Muḥammad Ibn ‘Aḥmad Ibn Rušd

(Averroes or Aven Ruiz or Averrhoes) (1126- 1198 A.D) examined the nature, quality, and utilization of *Tiryaq* as an antidote of poisons or venoms and as a treatment of several diseases [14]. He also wrote a book on *Tiryaq* “*Maqala fi’ l-Tiryaq*” (Treatise on Theriac) [14]. Till the sixteenth century, no remedy could be more beneficial for humankind than the *Tiryaq* antidote [3]. *Tiryaq* was considered the most powerful of all the conventional antidotes [7]. Different types of *Tiryaq* and its traditional uses are mentioned in Table 1.

Table 1: Types of *Tiryaq* and its therapeutic uses mentioned in different *Qarabadeen* (The Unani pharmacopeia’s)

S. No.	<i>Tiryaq</i> name	Action/Uses	References
1.	<i>Tiryaq wabai/ Tiryaq afa’yi</i>	Beneficial in cholera, smallpox, plague, and removes animal poison. According to Jalinoos, if any person takes it in an epidemic of plague, he is not suffering from this disease.	[15–21]
2.	<i>Tiryaq nazla</i>	Beneficial in colds, cough, eye pain and syphilis	[15–20, 22, 23]
3.	<i>Tiryaq al-asnaan</i>	To prevent toothache due to cold	[16–22, 24]
4.	<i>Tiryaq al-dharab/zarab</i>	Beneficial in constipation, stomach pain, dysentery, weakness of the stomach, and intestine. It strengthens the vital organs and Mujarrab (tested drug) in stomach purgation	[17–20, 22]
5.	<i>Tiryaq Farooq</i>	Beneficial in Ascites, Obstructive Jaundice, pain in the kidney, colic, and cholera and also the antidote for the snake, scorpion, and other poisonous animal bites.	[12, 15, 17, 22, 23, 25]
6.	<i>Tiryaq arba</i>	Beneficial in the colic, liver, diseases of spleen and antidote for the scorpion and other poisonous animal bites	[12, 15, 25–27, 16–22, 24]
7.	<i>Tiryaq Kabir</i>	It is used as an antidote for poisonous animal bites.	[17, 22]
8.	<i>Tiryaq tyn makhtoom</i>	Antidote for poison	[17, 22]
9.	<i>Tiryaq al-tyn</i>	Antidote for poison	[20, 25]
10.	<i>Tiryaq tyn-Romi</i>	The antidote for all kinds of poisons, and also used in poisonous animal bites.	[25]

5. CONCLUSION

Tiryaq has been one of the most popular medicines since ancient times. The medicine could almost cure any kind of disorder, and the stone of the philosopher, the elixir of life and rejuvenation. From ancient times until the sixteenth century, it was known by most naturalists, doctors, and pharmacists as the most perfect and effective antidote of all antidotes. However, it has been very controversial since its invention to our time and is supported by the eminent authority accorded to Unani medicine. The belief that *Tiryaq* could protect individuals from poisons and various maladies persisted well into the modern era, only gradually being dispelled by the progress of Western medicine founded on scientific principles. So scientific studies and clinical trials are needed on these compound formulations to ensure its scientific validation.

Conflict of interest

There is no conflict of interest to declare.

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6. REFERENCES

1. Taghizadieh A, Mohammadinasab R, Ghazi-Sha’rbaf J, Michaleas SN, Vrachatis D, Karamanou M. Theriac in the Persian traditional medicine. *Erciyes Med J*. 2020; 42(2):235–8.
2. Karaberopoulos D, Karamanou M, Androutsos G. The art of medicine: The theriac in antiquity. *Lancet [Internet]* 2012; 379(9830):1942–3. Available from: <https://samuelmerritt.idm.oclc.org/login?url=http://search.proquest.com/docview/1019029089?accountid=39632%5C>
3. nhttp://ex6rq5tg2c.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rft_id=info:sid/ProQ:nahs&rft_val_fmt=info:ofi/fmt:3. Baudoïn JRS. The Methods Of Natural Inquiry During The Sixteenth-Century: Bartolomeo Maranta And Ferrante Imperato. 2013
4. McDonald, Krumholz D. The serpent as healer: theriac and ancient near eastern pottery. *Source notes hist art [internet]* 1994; 13(4):21–7. Available from: <http://www.jstor.org/stable/23205619>
5. Dusanka K. [Theriac: medicine and antidote]. *J Int Med Hist [Internet]* 2003 [cited 2020 Oct 9];9(1):28–32. Available from: https://www.researchgate.net/publication/8580991_Theriac_medicine_a_nd_antidote
6. Kahl O. Two antidotes from the “empiricals” of Ibn at-Tilmīd combining macron below. *J Semit Stud* 2010; 55(2):479–96.
7. Fabbri CN. Treating medieval plague: The wonderful virtues of theriac. *Early Sci Med* 2007; 12(3):247–83.
8. Blanchard DL. Bartsch on theriac. *Arch Ophthalmol* 2001; 119(9):1360–3.
9. Berman A. The persistence of theriac in France. *Pharm Hist* 1970; 12:5–12.
10. Simioli C. The “Brilliant Moon Theriac”. 2016; (37):391–419.
11. Serracino-Inglott, Imelda. Theriac : a selected annotated bibliography of the history of Theriac. *Chamb Pharm [Internet]* 1986 [cited 2020 Oct 6]; 31–5. Available from: <https://www.um.edu.mt/library/oar/handle/123456789/48213>
12. Ibn Sina I. *Al Qanoon Fit Tib*. Vol. I-V (Urdu). New Delhi (India): IdaraKitabulShifa, 2007.
13. Leigh R. On Theriac to Piso, Attributed to Galen. *Stud Anc Med* 2016; 47(July).
14. Tbakhi A, Amr SS. Arab and Muslim Physicians and Scholars Ibn Rushd (Averroës): Prince of Science. 2008; 28:145–7.
15. Jalaluddin H. *Qarabadeen-e-Jalali*. New Delhi (India): CCRUM; 2006.
16. Kabiruddin M. *Bayaz-e-Kabeer*. New Delhi (India): Idara Kitabu-shifa, 2010.

17. Ghani HN. Qarabadeen-e-Najmul Ghani. New Delhi (India): CCRUM, 2010.
18. Khan A. Qarabadeen E Azam (Urdu translation). New Delhi (India): CCRUM, 1996.
19. Khan MS. Bayaz E Khas (Urdu Translation). New Delhi (India): Ejaz publishing house, 2006.
20. Kabiruddin M. Al-Qarabadeen. New Delhi: CCRUM, Department of AYUSH. Ministry of Health and Family Welfare, Government of India, 2006.
21. Abdul Hafiz H. Qarabadeen Jadeed. New Delhi (India): CCRUM, 2005.
22. Arzani A. Qarabadeen-e-Qadri. (Urdu translation) CCRUM. New Delhi (India): Department of AYUSH, Ministry of Health & Family Welfare, Government of India, 2009.
23. Anonymous. Qarabadeen Majeedi. 9th ed. New Delhi (India): (Waqf Hamdard) All India Unani Tibbi Conference, 1986.
24. Ali E. Qarabadeen-e-Ehsani. Dehli-6: CCRUM, 2006.
25. Sherazi MMB kareemuddin. Qarabadeen-e-masoomi. New Delhi (India): National mission for manuscripts, 2017.
26. Bin ali bin Umar M. Qarabadin-i Maristani. New Delhi (India): Al-Qazi printers, 2006.
27. Tabri A. Firdous Al-Hikmat. New Delhi (India): Idara Kitab Us Shifa; 2010.

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