Folk Medicine In The Arabian Gulf

– Written by Alan Weber, Qatar

The number of healers practicing 'folk' or 'traditional' medicine in the Arabian Gulf is unknown, but is probably substantial based on the number of published case reports from hospitals that have treated patients with complications from improperly carried out folk medical practices or poisonings from plant or heavy metal-based medicines. Folk or traditional medicine can be loosely defined as the medicine that was used before the advent of modern Western allopathic or evidence-based medicine in the late 19th century. The World Health Organization officially endorses traditional medicine and complementary and alternative medicine (TM/CAM), which it defines as "the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses. The terms complementary/alternative/non-conventional medicine are used interchangeably with traditional medicine in some countries"[1]. Although the World Health Organization believes that the efficacy and safety of traditional medicine has been confirmed through long practical experience and Western pharmaceuticals are unaffordable in many parts of the world, the World Health Organization nevertheless endorses more regulation, standardisation

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and testing of traditional medicine to increase safety and to understand its mechanisms of action.

Traditional medicine was the dominant medical system in the Gulf in the pre-oil era. The Arabian Mission of the Dutch Reformed Church in America was active in establishing modern medical care in the region, first by building a hospital in Basra in 1892 and then expanding into Bahrain when evangelist Samuel Zwemer invited Drs Sharon and Marion Thoms to set up practice there[2]. In 1903, the Arabian Mission built the Mason Memorial Hospital in Manama, Bahrain (still operating as the American Mission Hospital). Shortly after its establishment, a deadly epidemic of smallpox followed by another epidemic of plague broke out in Bahrain and rumours circulated that the Christian missionaries had poisoned the wells. Dr Sharon Thoms died in 1913 in Oman while trying to establish a hospital in Muscat. Due to the lack of development in Oman because of the collapse of its slave trade in the 19th century and the late discovery of oil, folk medicine was the only option for the majority of patients up until the 1960s[3]. In Qatar, the first modern hospital was built in Doha in 1950 since periodic visits from the British government doctor in Bahrain were not sufficient for Qatar's health needs[4]. From the 1930s to 1960s, all of the Gulf nations, using their newly acquired oil wealth, developed a modern health infrastructure first run by Egyptian, Indian, Pakistani, European and American personnel and later by their own medical graduates trained abroad or in their newly established medical schools.

The sources of folk medicine in the Gulf are various. First, some of the indigenous plant remedies used today by native Bedouins were probably discovered by accident or by observing animals and birds, which are known to self-medicate by purposefully selecting and eating medicinal plants. Nomadic tribes and settled coastal Arabs in the Gulf may also have had access to Sumerian, Akkadian and Babylonian medicine since both the Dilmun (modern Bahrain or eastern Arabia) and the Al 'Ubaid (modern Iraq) civilisations were active in the area. 'Ubaid pottery was uncovered at Ras Abruk in Qatar in the 1970s. The Akkadians introduced the concepts of

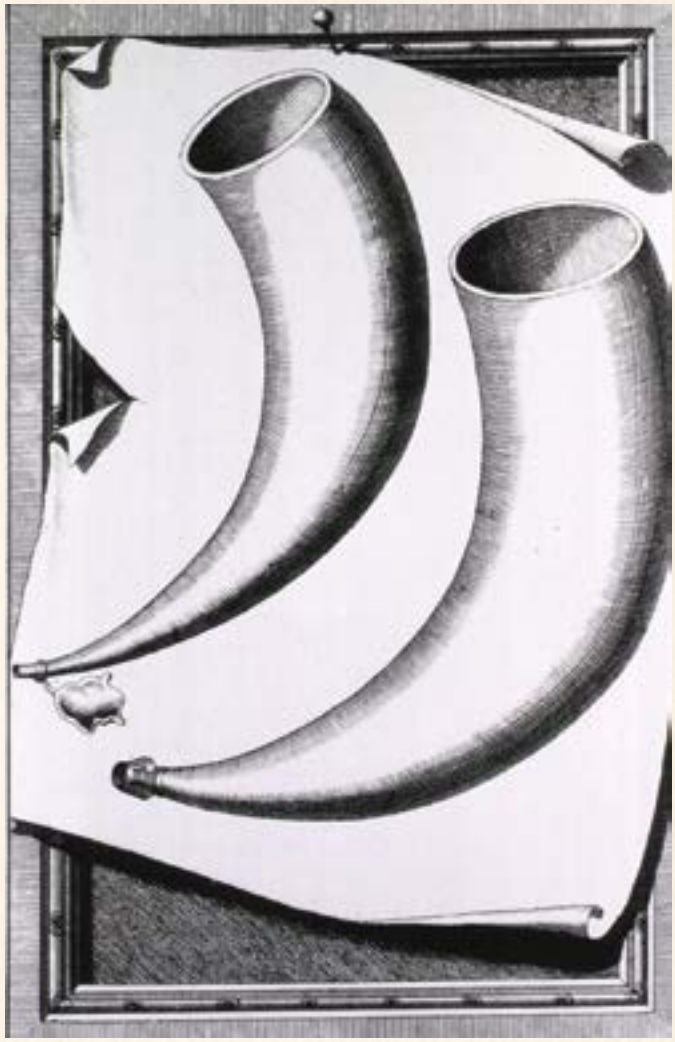


Image: Cupping horns used in Egypt in the 16th century. Found in *Medicina Aegyptiorum.*

symptomology, aetiology, diagnosis and prognosis to medicine and they used opium and the antibiotic tree resins Myrrh and Frankincense[5]. In fact, the southern region of Oman and Yemen were the largest producers of these highly coveted aromatic gums, harvested from the *Boswellia spp.* and *Commiphora spp.* trees and large quantities were exported to Egypt, Mesopotamia and later to Greece and Rome[6]. Myrrh and Frankincense are still used extensively in the Gulf as an internal medicine or burned as incense to purify the air. Most of these gums are produced in Oman, Yemen and Saudi Arabia.

Second, there is a learned, scholarly tradition of Persian and Arabic Islamic medicine based on clinical observation and critical synthesis of the ancient Greek medical tradition of Galen, Hippocrates, Soranos, Oribasius and Paul of Aegina. The two greatest practitioners of Islamic medicine were Abu Bakr Muhammad bin Zakariya al-Razi (Rhazes) and Abu 'Ali al-Husayn ibn 'Abd Allah ibn Sina (Avicenna). Rhazes's *Kitab al-hawi al-Kabir* (Latin: *Liber continens*) and Avicenna's *Qanun fi al-Tibb* (Latin: *Liber canonis totius medicinae*) were both used extensively as medical textbooks in the East and in Western universities until the end of the 17th century.

Two other notable figures in the Islamic medical tradition are Ibn Rushd (Averroes), a Cordoban philosopher and physician who wrote the medical encyclopaedia *Kulliyat* (Latin: *Colliget*) and another Andalusian physician Abu al-Qasim Khalaf ibn al-Abbas Al-Zahrawi (Albucasis), whose monumental book *Al-Tasrif* introduced new surgical techniques and instruments specially designed by him. Closely related to Islamic medicine is *Unani Tibb*, which

means 'Greek medicine' in Arabic. Unani Tibb shares its roots with the same authors used by Avicenna and Rhazes and it is still a flourishing tradition in India and Pakistan. Both Greek and Islamic medicine shared the fundamental physiological doctrine that the body is made up of four balanced humors (phlegm, blood, black and yellow bile) and that curing illness requires returning the humors to their natural balance through plant drugs, diet, baths and bloodletting.

Third, due to the extensive historical trade between India and the Gulf nations, the Ayurvedic medicine of India can be found in various forms in the Arabian peninsula, specifically in Oman, such as the hot turmeric plasters for skin diseases and arthritis. Ayurveda has both a folkloric and written tradition embodied in the two encyclopaedias Susruta and Charaka Samhita, and it also endorsed the idea of the balance of humors or energies (vata, pitta and kapha). Although the Portuguese controlled much of the trade in the Gulf for nearly 150 years (1507 to 1650) until they were expelled from Bahrain, Hormuz and Oman, they seem to have had little impact on medical practices, even though military surgeons must have been present to treat the 2000 to 3000 soldiers and sailors stationed at Portuguese forts in the Gulf[7]. Their medical practices at the time would have been very similar to Islamic medicine since they were also based on the humoral model and employed bloodletting as a primary therapy, just as the Islamic hakims would use hijama (cupping) to remove blood and restore humoral balance. One of the reasons that the Portuguese were interested in the region was trade in spices and medicinal drugs from both India and the Gulf (including the aromatic gums), which later also brought the Dutch, English and Ottomans to the Gulf.

Finally, Prophetic medicine (*Tibb al-Nabawi*) represents the most widely followed current traditional medical system in the Gulf. This medical tradition derives from passages in the Qur'an, hadith and sunna (way of life) of the Prophet Muhammed. Its continuing high status derives from its religious origins. There are many written compilations of prophetic medicine, the most famous being Ibn Qayyim al-Jawziyyah's *Medicine of the Prophet*. Ibn Qayyim was a thirteenth-century jurist and expert in hadith. He defined Prophetic medicine as "the guidance of the Prophet (Peace Be Upon Him) concerning the medicine which he used, was treated with, or recommended to others"[8]. Ibn Qayyim divided illness into sickness of the body and sickness of the heart (spiritual illness), which could be treated with natural or divine medicines. Unlike modern Western medicine, Prophetic and Islamic medicine firmly believed that spiritual illness or "sicknesses of the heart", such as religious uncertainty and doubt and inordinate desire and temptation, were serious conditions that required cures. Several ahadith from Sahih Muslim and Abu Hurayra state that God has sent a cure for every disease, except that of aging and death.

The central core of Prophetic medicine revolves around three primary means of healing: cupping (*hijama*), honey (*al 'asl*), and cautery (*wasm/kaii/kowie*). Al Bukhari transmits a saying of the Prophet which lists these therapies: "Narrated Jabir bin Abdullah: I heard the Prophet saying, 'If there is any healing in your medicines, then it is in cupping, a gulp of honey or branding with fire (cauterisation) that suits the ailment, but I don't like to be branded (cauterised) with fire" (7.71.587)[9].

CUPPING

Cupping or *hijama* has been carried out in many civilisations either for the removal of 'bad blood' or to rebalance the humors in the humoral model of physiology. Hijama is based on the Arabic root for 'sucking', since the procedure is often performed by slitting the skin and sucking out blood through a hollow horn[10]. Heated metal or glass cups, which create a vacuum as they cool, can also be placed over skin incisions to draw out the blood and vacuum pumps attached to the cups are sometimes used in modern practice. The practice is still a popular folk remedy in the Gulf used to treat a wide variety of disorders including migraine headache, jaundice, stomach ache, nausea, sprains, muscular pain and insomnia. At Hamad Medical Hospital in Qatar, Dr Hssanien and his colleagues at the Hijama Clinic determined in a clinical trial of 86 patients in 2007 that pain was reduced for all patients presenting with headache and back pain[11]. As with many other of the traditional treatments in the region, the mechanism of action is not known.

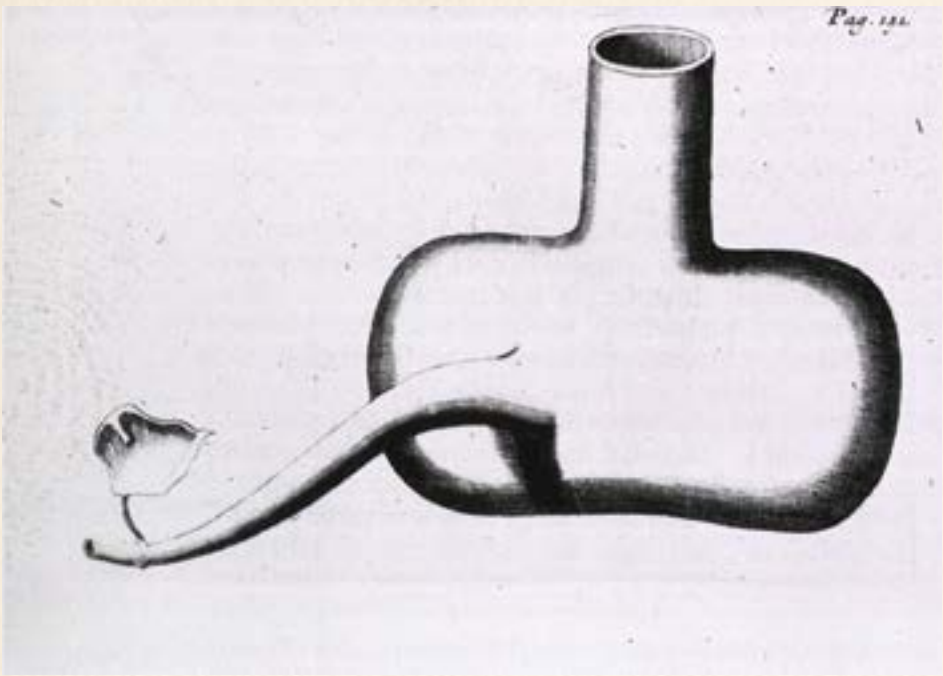
Although there was some interest in bloodletting in the 20th century to reduce blood pressure and to treat cor pulmonale and pulmonary oedema, the practice has been abandoned in modern medicine with one exception: haemochromatosis or iron-loading disease is a condition in which toxic levels of iron build up in the body organs, primarily due to an autosomal recessive genetic disorder. The only recommended therapy is phlebotomy, the periodic removal of blood which contains large amounts of iron in the erythrocytes. The popularity and wide-spread use of hijama in ancient times may be due to the fact that haemochromatosis is one of the most common inherited liver diseases, with a prevalence of 1 in 200 to 1 in 500 cases worldwide. In 2011, Zainel at Weill Cornell Medical College in Qatar summarised the research that suggests that lower levels of iron, which could be achieved through hijama, may decrease the risk of infectious disease[12].

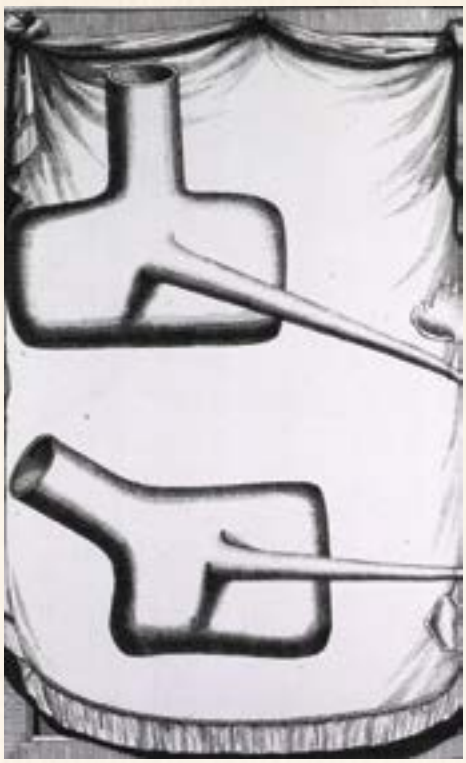
the procedure is often performed by slitting the skin and sucking out blood through a hollow horn

HONEY

Honey used as a wound dressing is attested in Egyptian medical papyri. It is also recommended in the Holy Qur'an and many written Islamic medical texts for internal use and is widely used in folk traditions. The oxidation of the glucose in honey creates hydrogen peroxide, used as an antibacterial bleach in hospitals, and the high osmolarity of this supersaturated sugar solution also inhibits bacterial growth. Honey found in bronze jars in Paestum, Italy, was virtually unchanged since its burial 2,500 years ago, attesting to honey's ability to retard bacterial and fungal growth. Manuka honey harvested in New Zealand and Australia contains an unknown phytochemical ingested by the bees that increases the

Image: Bloodletting procedure. Found in *Medicina Aegyptiorum*.





Images: Cupping cups used in Egypt in the 16th century. Found in *Medicina Aegyptiorum*.

antibiotic properties of the honey. In 2006, Nzeako and Al-Namaani at Sultan Qaboos University tested eight commercial honey samples purchased in Muscat, Oman and found that all of them inhibited the growth of the bacterium *Helicobacter pylori* which causes duodenal ulcers and gastritis[13]. The authors suggested that honey could be used in conjunction with the standard antibiotics amoxicillin and clarithromycin to eliminate *H. pylori*.

Two commercial brands of medical grade honey called L-Mesitran and Medihoney have been approved in the EU for burn treatment and wound care. Studies of honey's effectiveness as a wound dressing have had variable results. A meta-analysis of 19 studies on topical use of honey by Jull et al. in 2009 for the Cochrane Library concluded that "although honey may improve healing times in mild to moderate superficial and partial thickness burns compared with some conventional dressings, it was found that honey dressings used alongside compression therapy do not significantly increase leg ulcer healing at 12 weeks. There is insufficient evidence to guide clinical practice for other wound types"[14].

CAUTERY

Cautery (*wasim* or *kaii* in Arabic), is the third major therapy of Prophetic medicine. Like hijama, it is used on a variety of ailments including eye problems, headache, mental illness, jaundice and even cancer. The technique involves heating iron nails or similarly shaped metal objects and applying them to very specific cautery points on the body, which are learned by apprenticeship. Cautery has also traditionally been used in many cultures to seal and disinfect open wounds or to lance subcutaneous infections. The modern surgical electrocautery knife is based on these principles. Small crescent-shaped cautering irons have traditionally been used to burn off the ingrown eyelashes on the eyelid from trachoma infection. The eyelashes, which turn inward due to *Chlamydia trachomatis* bacterial infection, can scrape the cornea and cause blindness. It is still a common problem in the Gulf and Africa and now controlled by simple antibiotics. Patients in the Gulf sometimes visit a *mawasmer* (cauterer) if conventional therapy has failed. In some parts of Saudi Arabia, the practice is quite common. H.G. Watts reported in 1989 that 22% of 298 children admitted to King Faisal Specialist Hospital in Riyadh had been cauterised[15]. Most allopathically trained physicians in the Gulf region take a dim view of cautery, since they frequently must treat the unwanted side effects of cautery such as severe infection and scarring. Dr K-E. A. Abou-Elhamd of the ENT Department at Al-Ahsa College of Medicine, King Faisal University, Saudi Arabia states emphatically that "the practice of kaiy is not science-based and is associated with considerable health risks."[16]

HERBAL MEDICINE

Herbal medicine (*al-tibb al ashab*) is also widespread in the Gulf and medicinal plants and spices can be found in many souqs. The practice is dying out, however, as sons are no longer interested in learning their father's herbal knowledge (which is mostly unwritten) and some plants are facing extinction from habitat loss and overgrazing of animals. The Qur'an and hadith mention a great number of plants and

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fruits still used in folk medicine, for example dates, fig, pomegranate, colocynth, caper, fenugreek, aloes, chicory, indigo, senna, dill, mustard, olive and truffle[17]. The most prized is black cumin or black seed (*habat al-barack* = 'blessed seed') from the *Nigella sativa* plant due to the widely recorded hadith of Muhammed that black seed is the cure for all diseases, except death. There is abundant evidence from clinical trials that *Nigella sativa* exhibits antioxidant, anti-inflammatory, immunomodulatory, antibacterial, antiviral, antitumor and antiparasitic effects[18]. A mixture of *Aloe vera* and *Nigella sativa* is a common traditional glucose regulator for diabetics.

Another common and ancient folk remedy is the use of kohl, the dark eyepaint commonly seen on Arabic women, which is not just for beautification. Kohls contain stibnite, an ore of antimony (Arabic *ithmed*) which is an antibiotic against bacterial infection of the eye, such as trachoma. Some kohls also contain borax, a common ingredient in pharmaceutical eyewashes. However, studies by Hardy of kohls purchased in Oman and the United Arab Emirates indicate that lead compounds such as the mineral Galena are being substituted for antimony[19]. Although lead has an antibiotic effect, it is also highly toxic and numerous cases of lead poisoning in children have been reported in the Gulf, since kohls are used on children (who absorb more lead than adults) along with another popular lead-based medicine called Bint al Dhahab (Zahab), or 'daughter of gold.' Woolf reported 25 infants admitted to the Royal Hospital in Oman from 1987 to 1989 with acute lead poisoning (encephalopathy), with the cause of poisoning determined to be Bint al Dhahab in 80% of the cases[20]. Neurological damage occurred in 56% of the children. Importation of Bint al Dhahab is now banned in Oman.

Despite some undesirable side-effects, Gulf folk medical practices certainly merit further study in the framework of modern evidence-based medicine and randomised controlled clinical trials. Prejudices of scientists and physicians against traditional practices, however, are hampering efforts to test traditional medicines for efficacy and safety. But large numbers of Gulf residents are using traditional medicine (67% of respondents in a United Arab Emirates study in 2008 reported using a herbal medicine) and many of them attest to the healing properties of these substances and practices[21].

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