

An Ethnomedical Perspective of Arabic Traditional Cauterization; Al-Kaiy

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ABSTRACT

Cauterization (al-kaiy in Arabic) includes using a heated metal instrument (nail or metal rod) for skin application. This article describes the Arabic traditional cauterization from an ethnomedical view. The aims of this article are to document Arabic traditional cauterization practice, to address the beliefs and pattern of use about cauterization in various Arabic countries, and to identify adverse events and raise the safety concerns about this practice. The definition, history, historical indications, related knowledge, beliefs, the available information about the pattern of use in various Arabic countries and safety concerns are discussed. A new classification of identified complications related to cauterization is developed and described. Encouraging the reporting of complications due to cauterization and other traditional therapies by healthcare professionals, further field research and documentation of the knowledge related to the practice and raising the healthcare community and the public awareness towards the safety concerns and the complications related to cauterization are advised.

Keywords: Cauterization, Adverse events, Ethnomedicine, al-kaiy, traditional

1 Introduction

Traditional medicine includes knowledge, approaches, and various treatment practices, which are based on religious beliefs, experiences, and culture of the community [1]. Ethno-medicine is the science of the cultural interpretations of health, and also documents healing practices. Researches in ethno-medicine contributed to a better understanding and documentation of traditional healing practices [2]. The aims of this article are to document Arabic traditional cauterization practice, to address the beliefs about cauterization in various Arabic countries, and to identify adverse events and raise the safety concerns about this practice. Cauterization (al-kaiy in Arabic) includes using a heated metal instrument (nail or metal rod) for skin application. Traditional cauterization is very painful. Permanent scarring is a result of each traditional cauterization session [3]. Cauterization was practiced by ancient Egyptians and mentioned in Eber's papyrus which was written in 1550 B.C. Traditional cauterization was a popular treatment in Greek, Indian and Ancient Chinese healing practices [4]. Arabic traditional cauterization was known and practiced before the rise of Islam. Prophet Mohammed (peace be upon him) did not like to be cauterized as he said, "Healing is in three things: cupping, a drink of honey and cauterization (branding with fire) but I forbid my followers to use cauterization". In another version, the Prophet said: "If there is any healing in your medicines, then it is in cupping, a drink of honey or branding with fire (cauterization) that suits the ailment, but I don't like to be (cauterized) branded with fire" [5]. Evidently, Traditional cauterization techniques were advanced by the work of the famous Islamic and Unani medicine physicians such as: Al-Razi and Ibn Sina (Avecena). Al razi in his book "Al-hawi" introduced the concept of inserting a catheter in hollow organs such as the nose before doing cauterization. Then, the metal probe was passed through the catheter to cauterize the point. Modern endoscopic cauterization technique is an advancement of Al razi's concept [6].

Recently, from three decades, a large number of Arabic village barbers were the traditional healers who performed cauterization for the local community. A famous Arab proverb is 'Kaiy is the final remedy'.

Interestingly, cauterization is still practiced in many Arabic countries and there is a trust of some patients in this technique [7]. In summary, Cauterization is a traditional healing practice since Ancient Egyptians until now. It also practiced before and during the Islamic era, and the technique was advanced by famous scientists such as Al Razi, and Ibn Sina.

2 The Traditional and Historical Indications of Cauterization

The ancient Egyptians utilized cauterization to stop hemorrhage [7]. Hippocrates used cauterization to treat hemorrhoids, sciatica, and opening abscesses [4]. Aulus Cornelius Celsus (a Greek physician) recommended cauterization to treat gangrene, fistulas, and eye related diseases [4]. During the time of the Prophet (pbuh), people used cauterization for the treatment of wounds to stop bleeding or to prevent infection. [5] Furthermore, cauterization was used historically by Middle Eastern cultures to "tighten" the relaxation of nerves and muscles as they believed [3]. The Andalusian physician Abu Al-Qasim Al-Zahrawi developed special cauterization tools to stop bleeding from arteries [8].

3 The Knowledge Related to the Traditional Practice Methods

Recently, the cauterization tool is a metal rod which is pointed on its end. Another tool is a metal rod with a crescent shape at its top [8]. Traditional healers burn skin points to treat diseases. The number of points in one cauterization session is depending on the treated diseases. The average number is between one to seven points [8]. Cauterization is applied in three different methods: the first method is in a plus sign, the second method is in a two-centimeter straight line, and the third method is in a period sign. The most used methods are the second and the third [9]. In Saudi Arabia, traditional healers cauterized certain points for each disease. For the treatment of brucellosis, traditional healers cauterized occiput area, cervical spine, sacral region, patellar region, heels and soles while the treatment of knee osteoarthritis involved cauterization of both sides of each knee [10]. Additionally, goal bladder disease was treated by cauterizing multiple points below the right costal margin. Cerebrovascular strokes were treated by cauterizing toes, tendon of Achilles, popliteal fossa, trochanteric area, elbows and shoulders. Furthermore, Traditional healers cauterized points behind the ears and in front of tragus, usually in normal side for Bell's palsy, while cauterized sternum and the upper part of the chest, for the treatment of Acute myocardial infarction [10]. Cauterization is used also for a wide variety of pediatric disorders including jaundice, diarrhea, colic, respiratory diseases, abdominal distension and skin leishmaniasis [11]. Cauterization sites, instruments, and methods of application according to Arabic and Unani medicine for some diseases are mentioned in (Table 1) [4,9]. We address these methods to document the knowledge available regarding the practice of Arabic traditional cauterization.

Table 1: *Clinical Characteristics of traditional cauterization*

Ailment	Traditional points	The way of application	Traditional instrument shape according to Unani medicine
Headache and migraine	On the forehead	in a straight line, about 2 cm in length	Claviform shape
Facial Paralysis	on the back of the head or on the hand between the thumb and index finger and on the outer side of both feet.	in a straight line	Knife shape
Hernia	above and below the place of hernia or on the veins right or left of the hernia	in a straight line	Triangular or lenticular or claviform shape
Earache	in front of both ears	in a straight line	Punctate cautery
Pain in the back	at the site of the pain, and sometimes legs	in a straight line	Punctate cautery
stomach-ache	above and below the umbilicus	in a sign of period	Ring shape
Pain in the spleen	on the site of the pain	in a straight line	Cautery of three prongs
Eye problems such as Ptosis	on the upper part of the forehead	in a straight line	Crescent Shape

4 Traditional Beliefs Related to the Cauterization

There are deep rooted beliefs related to cauterization. Some of these beliefs are related to culture, and environment, however other beliefs are spiritual and religious. European doctors used cauterization to get rid of noxious humors according to the doctrines of humoral theory [12]. In Oman, the most of Omanis, believed that cauterization (Wasm in Oman) can treat resistant diseases when modern medicine has fail. Furthermore, some people go to traditional cauterization healers for all their diseases and ailments, because they believe in results [9]. Some healers believed that childhood diseases are caused by or related to supernatural powers including the devil 'Jin', and the evil eye [13]. Muslims and followers of other major religions believe in devil spirit, magic, and the evil eye. Approximately 90% of the world's societies believe in evil possession [14]. In Saudi Arabia, cauterization was one of the historical therapies which is used to chase devil spirits which are causing diseases [3]. In the era of Islam, the prophet Mohammed (peace be upon him) has forbidden cauterization and said "Healing is in three things: cupping, a gulp of honey or cauterization but I forbid my followers to use cauterization" or "I did not like to be cauterized" in another version. Some Islamic commentators explained this Hadith as the prophet has prohibited his followers to use cauterization, other commentators understood that cauterization is undesirable therapy which may be used as a last treatment choice, when other therapies failed, or when it is the most successful known therapy [15].

In Egyptian medical culture, one of the common believed cause to precipitate illnesses in childhood period is called Khar'a or Khada (illness by fright). This illness is described in the medical anthropology of Latin America as Susto. Khar'a is believed to be precipitated by a physical experience, which affect patient due to supernatural powers. It is believed that people who fall on rivers or wells may get this illness because rivers and wells are inhabited by spirits. Cauterization is one of the most used folk therapies to treat Khar'a [16]. In summary, there are various cultural and spiritual beliefs which are related to the practice of cauterization. Most of them are related to the failure of modern medicine or to the supernatural powers.

5 Patterns of use of Cauterization in Different Arabic Countries

In Sudan, traditional medicine is based on daily people experiences, systems of taboos, and deep-rooted traditions [17]. In 2016 hospital-based study, 40% of interviewed patients from Gaafar Ibnauf Children's Hospital in Sudan used cauterization in spite of 79% of them believed that cauterization is not effective. The common causes for using cauterization for treatment of children are abdominal distension and jaundice [17]. Another study reported that 4% of mothers in Khartoum, Sudan, used cauterization for the treatment of teething symptoms [18]. Cauterization is also used to treat chronic illnesses, headache and jaundice [19]. In Egypt, cauterization is dated back to the era of ancient Egyptians who used cauterization. [20] In a study published in 2010, 4% of people in Saft el-laban village in El-Minia, Egypt reported the use of cauterization for the treatment of illnesses [21]. In Jordan, about 13% of diabetic foot patients participated in a study published in 2012 reported the use of cauterization. Two patients mentioned the term (Sabra) for the cauterization. Sabra is a special type of cauterization which is usually used for the treatment of joints. Sabra is performed using a small piece of Alkaddhh (a flower of a wild tree called "Alqureia") which is put over the diseased joint then fire is applied to it and left until extinction [22].

In Saudi Arabia, Sayed et al reported that 5.1% of participated psychiatric patients used cauterization [23]. While, Al-Zahim et al, reported that only 3.4% of Saudi liver disease patients used cauterization and only half of them approved it as a valid therapy [24]. A study published in 1989 reported the wide spread of cutaneous cauterization in Saudi Arabia, and the prevalence of use among patients attending a pediatric orthopedic clinic was 22%. Furthermore, patents with Polio, and neurological disorders such as: cerebral palsy, congenital hydrocephalus, and congenital hypotonia are the most frequently cauterized [25]. Interestingly, a study published in 2014, hired 150 infants throughout one year who have a cauterization mark on their body from six hospitals in Aseer region in Saudi Arabia. In addition, Parents seek cauterization for the treatment of abdominal distension, prolonged cough, persistent vomiting and

excessive crying. The infant's chest and abdomen were the most frequently used parts for cauterization. Traditional healer are the main providers of cauterization [26]. Evidently, 12% of asthmatic patients who participated in a study conducted in Riyadh, Saudi Arabia reported the use of cauterization to treat their ailment [27]. In Oman, A survey conducted among pediatricians in Muscat reported that 9% of pediatricians, and 31% of their family members used cauterization which called Wasm or Wasam in Oman. Cauterization is widely practiced in Oman for the treatment of cancer [28,29]. Furthermore, fathers transferred their practice of cauterization knowledge to sons. The treatment of women patients is usually done by women healers who trained by their husbands, grandmothers or mothers. Cauterization is used usually to treat abdominal pain, stomach diseases, headaches, fever, neck pain, jaundice, back pain and tumors [9]. In Libya, A survey study published in 2015 reported that 90% of participants used cauterization due to parents' or relatives' advice. Patients performed cauterization for various reasons including the need for rapid improvement and the delayed results of modern medicine. Additionally, 63.5% of participants did not improve after cauterization and developed adverse events and complications [8].

Based on the previous published results, cauterization is a widely used traditional practice in Arabic countries. Cauterization in Arabic countries is common among both pediatric and adult patients. Cauterization has many Arabic names such as Al-kaiy, Sabra and Wasm. The practice is usually learnt from parents and relatives and practiced by traditional healers which constitutes a high risk of patients' safety.

6 Adverse Events and Complications of Cauterization

Cauterization has many reported adverse events and complications. Delayed diagnosing of cancer and skin pain are reported due to cauterization [7]. Farid and El-Mansoury reported many complications related to cauterization which include infected deep burns, infected blisters, multiple abscesses, severe bleeding, deterioration of the condition, weight loss, septic shock, gangrenous diabetic foot, blindness and delayed the appropriate treatment [8]. Al-Lawati et al examined patients with breast cancer between 2008 and 2014 reported that 100% of cauterized patients had axillary lymph node metastasis irrespective of the tumor size or stage which raises the relation between cauterization and the early loco-regional spread of breast cancer [29]. Furthermore, Al-Kaabi et al. reported that two patients with cauterization marks developed tetanus [30].

In infants, Al-binali et al reported that 26.7% of cauterized infants developed skin inflammation at the cauterization site, 4% developed wound infection and 6.7% hospitalized after cauterization [26]. Finally, Raza et al reported the complications of cauterization of four patients. Wound infection, hepatic encephalopathy, septic shock, cavernous sinus thrombosis, multiple splenic abscesses are the main reported complications. After treatment, one patient recovered, one patient had permanent unilateral blindness, and two patients were died [31].

In summary, adverse events and complications related to traditional cauterization are many, which ranged from scar formation and local wound infection to severe complications including death. This article suggests a new classification of adverse events related to cauterization. Adverse events related to traditional cauterization can be classified into local and systemic adverse events (Table 2).

Table 2: *Classification of complications related to traditional cauterization*

Local complications	Systemic complications
Scar formation	Septic shock
Skin pain	Splenic abscess
Local wound infection	Weight loss
Skin Inflammation	Tumor metastasis
Infected blisters	Tetanus
Skin Abscess	Cavernous sinus thrombosis
Gangrenous diabetic foot	Hepatic encephalopathy, Death

7 Conclusion

This article describes the Arabic traditional cauterization from an ethno medical view. The definition, history, historical indications, related knowledge, beliefs, the available information about the pattern of use in various Arabic countries and safety concerns are discussed. A new classification of identified complications related to cauterization is developed and suggested by this article. Arabic traditional cauterization is widely practiced in Arabic countries. Traditional untrained healers were the mainly practitioners of this traditional therapy. Complication related to the practice of cauterization is ranged from local skin adverse events to death. This article suggested a new classification of adverse events related to cauterization. Cauterization adverse events can be classified into local and systemic complications. This review recommends encouraging the reporting of complications due to cauterization and other traditional therapies by healthcare professionals, doing further field research and documentation of the knowledge related to the practice and raising the healthcare community and the public awareness towards the safety concerns and the complications related to cauterization.

8 Declaration

8.1 Study Limitation

There are a limited number of published researches discussing this field which constituted a limitation for our study.

8.2 Funding Source

None

8.3 Competing Interests

None

How to Cite this Article:

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