



RESEARCH ARTICLE

MEDICAL AND SCIENTIFIC BASIS OF CAUTERIZATION (KAI)

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ABSTRACT

Cauterization (*Kai*) is an ancient medical practice and one of the mode of *Ilaj-bit-tadbeer* (regimenal therapy) in Unani Medicine. It has been long forgotten in Unani practice due to perceived notion of pain and suffering associated with it. As per quoted in *Sahih Bukhari* that The Prophet of Allah (peace and blessings of Allah be upon him) recommended healing through branding with fire (cauterizing) but forbid its practice probably due to pain. However, even after coverage of pain through anesthesia and analgesic drugs, cautery (*Kai*) is still less practiced in Unani medicine. This paper briefly reviews the basic aspect of cauterization in Unani medicine.

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INTRODUCTION

In Unani medicine, cauterization (*Kai*) is one of the mode of regimenal therapy (*Ilaj Bit-Tadabeer*). It is the application of corrosive drug or hot metal over the affected site for the therapeutic purposes. It destroys some tissue, in an attempt to mitigate damage, remove an undesired growth, or minimize other potential medical harmful possibilities such as infections, when antibiotics are not available. Unani scholars have also used cauterization in the treatment of epilepsy, headache, apoplexy etc. Previously it was infrequently used due pain and suffering. Nowadays, it is a painless procedure but still less practice by Unani surgeons. In modern surgeries it is extensively used mainly to stop blood loss and seal blood vessels. In addition, it is also used frequently to remove growths (like moles, viral warts, cancerous growths etc.) and sever tissue such as during female sterilization where the fallopian tubes are severed with electro-cautery.

Aim

This review briefly focus on concept, method, indication, contraindication and adverse effects of long forgotten cauterization in Unani Medicine.

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Data sources

Urdu and English version of Unani literary and Prophetic medicine books were utilized. Original e-research papers were used as databases. The limitation is only reviews basic aspects of cauterization and lacks history. However some information about its usage as per hadith is also mentioned.

RESULTS

Cauterization and Hadith in Islam

As narrated by *Ibn 'Abbas* that the (The Prophet said), "Healing is in three things: A gulp of honey, cupping, and branding with fire (cauterizing)." But I forbid my followers to use (cauterization) branding with fire." Quoted in *Sahih Bukhari*, Volume 71, Hadith 584. Many *Ahaadeeth* have been narrated on the topic of cauterizations, which the scholars have divided into categories. Those which indicate that it is permissible, such as the *hadeeth* of *Jaabir* who said: *Ubayy* was struck by an arrow in his medial arm vein on the day of *al-Ahzaab*, and the Messenger of Allah (peace and blessings of Allah be upon him) cauterized it. Narrated by Muslim, 2207. The Prophet of Allah (peace and blessings of Allah be upon him) preferred scarification to cauterization for the purpose of bloodletting and put phlebotomy after scarification. It is only when all other remedies have failed, that the physician should try cautery. It

should only be used when the strongest medicines have been defeated by constitution and no other remedy has proved successful. (Azimabadi, NA)

Cauterization (*Kai*)

Application of caustic drug or hot metal over the affected site for the purpose of treatment so that the heat in effect, may correct the deranged condition of the affected area.

Types of cauterization

- *Kai bil-Hadeed*: Cautery by application of heated Iron.
- *Kai bid-dawa*: Cautery through caustic drugs (acids or alkalis).
- *Kai bil-Naar*: According to scholars, the procedure included to suck through the affected side with help of *muhajim* (do cupping) frequently for many days so that vesicle appeared. Then cauterization should be done using fire. Now these days galvano-cautery or electro-cautery has replaced this procedure.

Aims and objectives of Cauterization

- To limit the infection e.g. used to prevent spread of carcinoma or carbuncle, so that healthy tissues or organ remain protected from spread of infection.
- Skin diseases which are not treatable through medications e.g. chronic eczema.
- To stop bleeding e.g. epistaxis or other vascular bleeding.
- To resolute or expel Deep seated Infection which are not treatable through medication.
- To amputate or destroy the Gangrenous/ Ischemic or highly infected/ putrefied/ septic muscles or part of body.
- To empower (*Islah*) the organ bearing cold temperament. In coxalgia (*Waj-ul-Warak*), cauterization through hot metal cups or through fire done over hip bone. (Ahmad, 2001; IbneSina, 1992)

Indications

- Disease of brain caused by derangement in phlegm e.g. paralysis, recurrent cold and cough, melancholia, depression, epilepsy, otalgia, migraine.
- Musculo-skeletal disorders such as Backache, coxalgia, sciatica, tubercular joints etc.
- Hemorrhage such as epistaxis, vascular bleeding, and menorrhagia
- Carcinoma
- Non healing ulcers, gangrene of the tissues or body part.
- Moles, polyps, piles, skin outgrowths.
- Splenomegaly, ascites. (Ahmad, 2001; IbneSina, 1992; Masihi, 1986)

Material Used for cauterization

Unani scholars preferred gold for cauterization. (Ahmad, 2001; Razi, 2004; IbneSina, 1992) *Razi* in His Famous book 'Al-Hawi' stated that cautery through gold is better for crushed wound while cautery through silver or copper is preferable for

treating non-healing ulcers and carcinoma. Now electric-cautery has been widely used for cauterization. (Razi, 2004) *Razi* quoted statement of *Jalinoos* in Al-Hawi "gold is best in cautery and doesn't cause vesicle formation and heal rapidly. (Razi, 2004)

Place for cauterization

- Sometimes cautery is imprisoned superficially e.g. in the wounds where separation and removal of infected material or muscle is required.
- Sometime cautery has to be done inside nose, mouth and anus etc. In that case cautions should be taken in applying cautery. (Ahmad, 2001)
- To cauterize in the dimension infected muscle, cautery instrument should be applied over the area which is more painful. In addition, bone behind the infected muscle is also advised to be cauterized. (IbneSina, 1992)

Role of catheter in Cauterization

Razi in 'Al-Hawi' instructed to insert catheter first in hollow organ like nose mouth anus. Then allow passage of cauterization instrument (pencil) down the way through the catheter to cauterize the aimed area of the organ. (Razi, 2004; IbneSina, 1992) Modern technique such as endoscopic guided cauterization is just advancement in concept of *Razi*. He also stated that wide catheter should be used to cauterize lower palate. (Razi, 2004) *Razi* also advised to wrap cold wet cotton around the catheter. This prevent the catheter to warmed up and affect the non-intended part. (2) *Ibne sina* in 'Al-Qanoon' advised to apply *abrak*, *gaeru* dipped in vinegar (*sirkah*) on catheter (*qalib*) first. Afterward, a cloth has to be wrapped around and then chilled with rose (*Gulab khoora*) and then inserted in to the intended area of cauterization. (IbneSina, 1992) In case non-healing deep ulcers (*Quruh-e-Balkhiya*) or sub-dermal lumps (*Toosa/ mole*), the cautery instrument should be conical in shape like mouse tail, passed to the area. Then rub the area intended to cauterize with rough cloths so that burned material sloughed off. Then cauterize the area till it reached to muscles or more up to bones if also involved.

It is quoted in 'Kitabul Advia Mufaradah' that in case of hemorrhage, cauterization is to be done at affected area in such an extensive way that may cause high grade fever. Cauterization will be considered in-effective if fever doesn't appeared afterward. He proclaimed that if thick plaques are generated and fever doesn't appeared that signifies congestion of blood in that part and considered a dangerous condition. (Razi, 2004) This is also documented to apply extremely hot cautery instrument in hemorrhage to produce a very thick clot. (Razi, 2004; Ibne Sina, 1992) Hippocrates (*Buqrat*) stated in 'Kitabul Al-Ahwiya Wal-Baldaan' as quoted by *Razi* in Al-Hawi "cauterization is not advisable in extreme hot and cold weather. (Razi, 2004)

Care of burn scab

Razi advised local application of paste, made up from wheat flour, water and olive oil (*Roghan-e-Zetoon*) to slough off the burn scab. He also advised application of *Marham basliqoon*

should be applied after grinding with *Apium Graveolens* (karafs) or *Doronicum Hookeri* (daroonj akarabi) considered highly effective among other topical medication. (Razi, 2004) Munbit-ul-Lehamadviah (drugs which promote scabbing): *Irsa* (*Iris ensata* root), *zarawand* (*Curcuma zedory*), *shehad* (honey), *Ghee* (clarified butter). Grinding the *mooli* (*Raphanus sativus*) with vinegar (*sirkah*) and its local application of the paste completely eradicate the after-effect of cauterization.

Disadvantages

- Scar formation
- Infection in cauterized wound. (Sina, 1992; Masihi, 1996)

Precautions

- Cauterization affliction should not reach spinal cord.
- Cauterization should not distressed ligament and tendons. (Sina, 1992)

Conclusion

Cauterization is one of the age old surgical practice, used to treat diverse diseases where other modes of treatment failed. Disfigurement is one of the important disadvantage made it unpopular in population in the way it has been used in Unani medicine.

In modern medicine, this practice is used with great frequency, but the methods have changed like electrocautery which is commonly used in every surgical procedure.

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