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Review Article

The Art of Healing with Heat: A Contemporary Review of *Amal-i-Kayy* (Cauterization) in Unani Medicine

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Abstract



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The Unani system of medicine employs four primary therapeutic approaches - '*Ilāj bi'l Tadbīr*' (Regimenal Therapy), '*Ilāj bi'l Ghidhā'*' (Dietotherapy), '*Ilāj bi'l Dawā'*' (Pharmacotherapy) and '*Ilāj bi'l-Yad*' (Surgery). Among these, '*Ilāj bi'l Tadbīr*' holds particular significance, as it enhances overall health by strengthening the body's natural defence mechanisms. One of the oldest but less frequently practiced methods within this system is *Amal-i-Kayy* (Cauterization), a technique that involves the application of heat or burning the body tissues for therapeutic purposes. This method has been historically used to stop bleeding or discharge of fluids, remove unwanted skin, or create openings in the skin. *Amal-i-Kayy* has ancient roots and was widely practiced in various traditional healing systems including Graeco-Arab, Chinese, and especially Unani Medicine. Historical documentation of *Amal-i-Kayy* can be traced back to around 1600 BC in the Egyptian Surgical papyrus, where it was recommended for treating ulcers and tumors. In Ayurveda, *Sushruta* (800 BC) applied this method to cauterize veins and tendons to manage various ailments. Hippocrates (*Buqrāt*), in the 4th century BC, also described its use for treating hemorrhoids. In the Arab world, cauterization was practiced during the time of Prophet Muhammad for treating war-related injuries, severe bleeding caused by ruptured blood vessels, chronic ulcers, pleurisy, and during surgeries like amputations and incisions. This method is particularly effective in conditions associated with *Sū'-i-Mizāj Bārid-Raṭab* (cold and moist temperament), due to the *Ḥār-Yābis* (hot and dry) effect of the cauterization process.

Keywords: *Amal-i-Kayy*, cauterization, Tumors, *Sū'-i-Mizāj Bārid-Raṭab*, Unani

Introduction

In the Unani system of medicine, several regimenal therapies ('*Ilāj bi'l Tadbīr*') are employed, such as *Hijāma* (cupping), *Faṣd* (venesection), *Dalk* (massage), *Qai* (emesis), *Riyazat* (exercise), *Ta'leeq* (leeching), and *Ishaal* (purgation). Among these, *Amal-i-Kayy* (cauterization) is one of the oldest therapeutic procedures, particularly used when medicinal treatment fails to heal wounds or control bleeding.¹ *Amal-i-Kayy* involves the application of heated metals, oils, or corrosive substances to the affected site to destroy diseased tissue or seal wounds. Despite its historical importance, it is less commonly practiced today due to concerns regarding pain and potential side effects.

Renowned Unani scholar *Razi*, in his book *Al-Hawi*, advised the use of a catheter inserted into hollow organs like the mouth, nose, or anus, through which a cauterization tool could be applied to target specific areas. He also cautioned against using this method during extremely hot or cold weather. Similarly, *Ibn Sina*, in *Al-Qanoon*, suggested the use of a catheter coated with

materials such as *Abrak* and *Geru* soaked in vinegar, then wrapped in cloth and cooled with rose water before applying it to the target site. In modern surgical practice, cauterization (*Amal-i-Kayy*) is used to control hemorrhage, seal blood vessels, and remove warts, moles, tumors, or even fallopian tubes are served with electro cautery to achieve female sterility. *Jalinoos* (Galen) recommended gold for cautery due to its rapid healing properties and minimal blister formation.²

Historically, *Amal-i-Kayy* has been used to treat conditions like epilepsy, headaches, melancholia, coxalgia, and sciatica. Although this method is rarely used today, it is deeply rooted in the Unani medical tradition. It is also mentioned in *Tibb-i-Nabvi* and *Hadith* literature, where it is acknowledged as an effective treatment, though the *Prophet Muhammad* advised its use only in cases where no other option is available.³

Buqrāt (Hippocrates) extensively discussed this method in *Kitāb-al-Fusūl* (Hippocratic Corpus), recommending it for conditions like hemorrhoids and plague-related swellings.⁴ *Ibn Sina* emphasized that *Amal-i-Kayy* is

beneficial as it halts the progression of destructive lesions, breaks down putrefactive material trapped in tissues and controls bleeding.⁵

Abul Qasim Zahrawi, a pioneer of surgical techniques and medical instrumentation, extensively documented this method in his renowned work *Al-Tasreef*, dedicating 56 chapters to it. He believed that cauterization could be used in any season and for all types of humoral imbalances, contrary to the views of many of his contemporaries.^{6,7} *Jalinoos* also supported its application for managing warts.⁷

Prominent Unani physicians such as *Razi*, *Majoosi*, *Zahrawi*, *Baghdadi*, *Jurjani*, and *Masihi* have all contributed to the knowledge of *Amal-i-Kayy*. Notably, *Ibn Hubal Baghdadi* described its use in surgical procedures for draining liver abscess, further demonstrating its wide applicability in traditional Unani surgical practice.⁸

Historical Background

Amal-i-Kayy in Unani

In Unani medicine, *Amal-i-Kayy* (cauterization) has been a well-documented and historically significant therapeutic approach. The Roman physician *Aritiyoos* developed a method of cauterization using *Zarareeh*. *Jalinoos* (Galen), active between 131–201 AD, recommended this procedure for treating warts. *Ibn Sina* extensively detailed its types, advantages, procedures, and necessary precautions in his renowned medical text *Al-Qānoon fit Tibb*.^{7,9,14}

Historical evidence of cauterization can be traced back to the *Surgical Papyrus* dated around 1550 BC, where fire cautery was mentioned. In Ayurvedic medicine, *Sushruta* (800 BC) used cauterization techniques to treat various ailments involving veins and tendons.^{7,9,10,11} This therapy also found acceptance in traditional Chinese medicine. *Screbonius Largus*, the physician of Roman Emperor Claudius, strongly endorsed it, while *Aflatun Saghira* (Saqbali) authored a book solely focused on cauterization. The renowned Unani physician *Rufas* documented the use of *Amal-i-Kayy* for treating rabid dog bites.⁷

Hakim Celsus, a 1st-century physician, recommended cauterization for inguinal hernias, especially in cases where other treatments had failed. He suggested cauterizing the inguinal canal after retracting the intestines and also applied the method for internal eye disorders like *Shatra-e-Dakhilya* (entropion) and *Sha'ra tul Ain* (trichiasis). During his time, *Amal-i-Kayy* was used not only for stopping hemorrhage but also for counter-irritation and removing decayed tissue.^{7,9,12}

Hippocrates (460–377 BC), in his book *Kitabul Fusul*, described its use in treating conditions such as sciatica, hemorrhoids, and abscess. Later, *Abul Qasim Zahrawi* (936–1013 AD) invented specialized instruments for cauterization that were instrumental in controlling arterial bleeding.¹⁰

The use of cauterization dates back to around 3000 BC in ancient Egypt, where it was employed to treat what were

termed “fire-stick” tumors. Approximately 26 years later, Hippocrates recommended it for joint disorders and hemorrhoids.^{7,10,11} Galen, in the 2nd century AD, described cauterization as a method to destroy tumor roots, but advised against its use in tumors deemed unnatural.^{10,11}

By the 7th century AD, cauterization was not only considered a therapeutic intervention but also recognized as a haemostatic technique. Archaeological findings indicate its continued usage in ancient North America between 300 and 500 AD.¹¹

Prominent Unani scholar *Abu al-Hasan Ali ibn Sahl Rabban al-Tabari*, in his text *Firdaus al-Hikmah*, described its application for sciatica. Later, *Zakariya Razi* (865–925 AD) supported cauterization for ailments like sciatica, hemorrhoids, coxalgia, and as a preventive measure against excessive bleeding. Another notable physician, *Abul Hasan Ahmad Bin Mohammed Tabri* (985 AD), also endorsed this method for various conditions. *Ibn-e-Rushd* emphasized the therapeutic value of cauterization and even listed certain drugs that produce a burning effect similar to fire. *Zahrawi* advocated the use of hot metal or oils not only for controlling hemorrhage but also for treating ailments such as autism, headaches, dental pain, depression, and piles.¹¹

In the 19th century, the practice was revitalized with the advent of electrical diathermy, offering a more precise and controlled means of generating heat to control bleeding during surgery. Professor JP Mounir, a surgeon of the same era, shared his effective experiences using cauterization to treat chronic conditions such as non-healing sinuses, dog bites, rheumatism, benign tumors, fungal infections and polyps. In contemporary medicine, the traditional hot iron has evolved into advanced tools like electrocautery and galvanocautery, now widely used in surgeries to prevent or control hemorrhage.¹¹

Amal-i-Kayy in Arab medicine and *Tibb-e-Nabvi* (Prophetic Medicine)

The practice of *Amal-i-Kayy* (cauterization) was well known among Arab physicians even before the advent of Islam. It was commonly said among the Arabs that cauterization was considered the ultimate form of treatment. Historical records indicate that Arab doctors treated Fredric Shah Sisley using this method.^{10,12}

According to a narration by *Ibn 'Abbas*, the Prophet Muhammad (SAW) stated that healing can be found in three remedies: honey, cupping (*hijāma*), and *Amal-i-Kayy* by fire.^{9,11,12,13} However, the Prophet also discouraged the use of cauterization by fire, advising his followers to avoid it unless absolutely necessary.^{11,12}

Numerous *Ahadeeth* (sayings of the Prophet) addresses the use of cauterization, indicating that it is permissible under certain circumstances. In a narration by Jabir bin Abdullah, the Prophet Muhammad sent a doctor to care for *Hadrat Ubayy bin Ka'b*. The physician treated him by making an incision in a vein and then sealed the wound using cauterization.^{12,13}

In another *Hadeeth*, when *Sa'd bin Mu'adh* suffered a deep wound in his medial arm vein that led to continuous

bleeding, the Prophet ordered cauterization. The wound initially swelled, prompting a second application of cautery. This reflects its use in severe injuries to control bleeding and prevent infection.¹⁴

During the lifetime of the Prophet Muhammad, cauterization was commonly used as a medical procedure to treat wounds, stop hemorrhages and avoid infection. According to a narration from *Sahih al-Bukhari*, Anas once suffered from pleurisy and underwent cauterization for relief while the Prophet was still alive, indicating its established role in medical practice of that time.^{9,12,14}

Definition

Amal-i-Kayy (cauterization) refers to the Unani procedure of burning or destroying body tissue using heated metal, electric current, fire, or corrosive substances. This technique targets specific areas of the body to dry excess fluids, stop bleeding, or remove decayed tissue.⁷ In Unani literature, this method is termed *Amal-i-Kayy* - an Arabic expression where *Amal* means "procedure" and *Kayy* means "to cauterize". The term is derived from the Unani word *Kaiein*, which means "to burn". The tools used in this procedure are called *Mikwāt* (cautery instruments), while the site on the body where cauterization is applied is referred to as *kayya*. The person who performs cauterization is known as a *Kawwa* (cauterist).^{9,12,13}

Aims and Objectives of *Amal-i-Kayy*^{1,5,6,13,15,16}

1. To prevent the progression of destructive lesions.
2. To manage chronic or non-healing ulcers.¹⁷
3. To break down harmful or decayed substances that are tightly attached to the organ's structure, and to stop bleeding (*Jiryan-ud-Dam*).
4. To eliminate decayed matter and necrotic tissue that is deeply embedded in the body.
5. To neutralize and expel poisonous substances from animal bites or stings.
6. To control and stop bleeding, such as in cases of nasal bleeding (epistaxis).
7. To strengthen organs weakened by cold conditions or *Mizāj-e-Bārid*, for example, in cases like sciatica, coxalgia.
8. To treat persistent skin disorders, such as chronic eczema.
9. To stop the spread of infection or decay from an affected area to a healthy one.
10. When medicinal treatments are ineffective in removing or liquefying decayed tissue.
11. To prevent the flowing and infiltration of catarrhal fluid.

Types of *Amal-i-Kayy*

A. According to Material used^{1,9,11,15}

1. *Kayy bi al-Filz*: Cautery by application of heated metals.

a. *Kayy bi'l Hadeed*: Cautery by application of heated Iron.

b. *Kayy bi'l Tila*: Cautery by application of heated gold rod

c. *Kayy bi'l Nuhas*: Cautery by application of heated copper rod

d. *Kayy bi'l Nuqra*: Cautery by application of heated silver rod

Galen has described pure gold as the best metal, as it does not lead blister formation.

2. *Kayy bi al-Dawa*

This form of cauterization involves the use of caustic substances such as acids or alkalis, hence, it is known as *kayy bi al-Dawa* (cautery through medicine). The Roman physician *Aritiyus* introduced a method of *Amal-i-Kayy* using *Zarareeh* (cantharides). The renowned Arab physician *Hunain Ibn Ishāq* authored a dedicated work on this method titled "*Ikhtiyār-ul-Advia Al Muharriqā*," which details various drugs beneficial in disease treatment when used as cauterizing agents. For instance, he described the use of a corrosive ointment for treating nodular lesions in tertiary syphilis. This ointment was composed of ingredients such as *Khardal* (black mustard), *Zubd-ul-Bahr* (cuttlefish bone), *Kibrit* (sulfur), *Revand* (rhubarb), *Muqil* (gum of *Commiphora mukul*), and *Ushaq* (*Dorema ammoniacum*), all mixed in *Roghane-Mom Kuhna* (aged wax oil).^{15,18}

3. *Kayy bi al-Naar*

The cauterization done using fire. According to scholars, the procedure included to suck through the affected site with help of *mahajim* frequently for many days to make the site prominent.

B. According to the Site^{1,9,11,15}

1. External Cauterization

This method is relatively simple because both the cauterizing tool and the targeted body area are clearly visible. It is commonly applied in conditions such as skin diseases, anal fistulas, chronic wounds, and abscess.

2. Internal Cauterization

Performing *Amal-i-Kayy* on internal parts of the body such as the nose, mouth, uterus, and rectum is more complex. According to *Ibn Quf Masīhī* in his surgical text *Kitāb al-Umda fil Jarāhat*, a wooden hollow tube is used in this procedure. The cauterizing instrument, with its thick end, is placed inside the tube, which is then inserted into the relevant body cavity. The tool is pushed forward through the tube until it reaches the precise area needing cauterization. This type of internal cautery is effective in treating liver diseases (*Amrāz-i-Jigar*), bladder stones (*Hisāt-i-Masana*), internal abscesses, hemorrhoids, and digestive issues.

3. Other types of *Amal-i-Kayy* ^{9,15}

1. *Amal-i-Kayy Bukhāri* (Steam or Vapour Cauterization)

This technique involves applying steam to a targeted area of the body for a specific duration. It is particularly beneficial for managing benign tumors and is also used to control uterine bleeding.

2. *Amal-i-Kayy Shamsī* (Solar Cauterization)

In this method, sunlight is focused onto a specific body part using a magnifying glass to generate heat or cause burning. The convex lens concentrates solar energy into a single point, converting it into heat, which is then utilized therapeutically in this form of cautery.

3. *Amal-i-Kayy bil Ghār* (Gas Cauterization)

A directed stream of burning gas is applied to affected tissue, primarily to stop bleeding during surgical procedures or to reduce the size of tumors in patients who are not suitable candidates for surgery. A probe is used to deliver the gas to the precise site.

4. *Amal-i-Kayy bil Mā-ul-Hārrah* (Hot Water Cauterization)

Both *Zahrawi* and *Ibn Quf Masīhī* recommended using hot water for cauterization, especially in treating conditions like *Iraq-un-Nasā* (sciatica) and various types of warts.

5. *Amal-i-Kayy Jamdī* (Cold or Cryo-Cauterization)

This method uses extremely cold agents-such as liquid nitrogen, carbon dioxide snow, or chilled instruments to destroy tissue by freezing. It is commonly used for issues like chronic wounds, warts, telangiectasia, and excessive vaginal discharge or bleeding. The procedure operates at temperatures as low as -80°C and must be performed with caution.

6. *Amal-i-Kayy Tahtul Jild* (Subcutaneous Cauterization)

In this approach, a caustic substance is injected beneath the skin to achieve cauterization. It is considered a subdermal method of treatment.

Benefits of *Amal-i-Kayy* ^{9,15}

1. Prevention of Disease Spread (*Mane' Intishaar-e-Fasaad*): *Amal-i-Kayy* acts as a barrier to stop infections from spreading from one organ to another.

2. Warming of Organs (*Taskheen-e-Uzoo*): When an organ develops a cold temperament (*Mizaj-e-Bārid*), cauterization helps restore warmth (*Mizaj-e-Hār*) to the affected area.

3. Resolution of Harmful Substances (*Muhallil-e-Mavād-e-Fāsida*): When toxic or putrid materials become deeply lodged within an organ's structure, *Amal-i-Kayy* assists in breaking down and eliminating these substances.

4. Prevention of Bleeding (*Mane' Jiryaan-e-Khoon*): Cauterization has long been recognized as an effective way to control bleeding, a practice still widely used today in surgeries through electro-cauterization.

5. Prevention of Harmful Fluid Flow (*Mane' Insibāb-e-Mavād*): In certain cases, the downward flow of harmful fluids (*Mavād-e-Fāsida*) can damage other organs. Cauterization of the primary organ is used to halt this spread.

6. Removal of Decayed Tissue (*Indifā'e-Lahm-e-Fāsida*): In situations where tissues have become necrotic, red-hot metal instruments are used to cauterize and remove the decayed tissue.

7. Drying of Wounds (*Tajfif-e-Qurooh*): Excessive moisture in wounds can delay healing. *Amal-i-Kayy* dries the wound area, aiding in faster recovery, especially in chronic and non-healing ulcers.

8. Elimination of Toxins (*Izāla-e-Sumoom*): Cauterization can also help in detoxifying the body by eliminating poisonous substances.

9. Stimulation (*Tahreek*): *Amal-i-Kayy* can be used to activate or stimulate specific body parts, and it has shown benefits in treating patients in comatose states.

10. Counter-Irritation: It is also employed as a counter-irritant therapy. *Zahrawi* recommended its use to manage recurrent shoulder dislocations by strengthening the affected area.

11. Removal of Putrefaction (*Izāla-e-Ta'affun*): Historically, *Amal-i-Kayy* was used as an antiseptic technique until the 20th century, after which it was largely replaced by antibiotics.

Indications

1. Rabid Dog Bite (*Gazidgi-i-Sag-i-Diwana*): The renowned Unani physician *Rufus* highlighted the use of *Amal-i-Kayy* (cauterization) for treating bites from rabid dogs.⁸

2. Liver Abscess (*Dubayla al-Kabid*): *Ibn Hubal Baghdadi* described cauterization in surgical procedures for draining pus following the rupture of a liver abscess.⁸

3. Controlling Bleeding (*Haemorrhage*): Galen noted that proper cauterization forms a thick, bloodless scab (eschar), effectively halting bleeding. He advised the use of very high heat to avoid worsening the condition through inadequate cauterization.¹¹

4. Entropion and Trichiasis: Celsus, in the 2nd century AD, recommended cauterization for treating inward-turning eyelids (Entropion) and misdirected eyelashes (Trichiasis).¹¹

5. Skin Conditions (Moles, Polyps, Piles, Warts): Galen supported the use of cauterization for warts, and Hippocrates also mentioned it as a treatment for hemorrhoids.¹¹

6. Dead Tissue (Necrosis and Gangrene): Aulus Cornelius Celsus advised burning the affected area thoroughly to stop the release of harmful substances from gangrenous tissues.¹¹

7. Epilepsy (*Sara*): *Hakim Azam Khan*, in *Al-Akseer*, suggested placing a red-hot piece of coral between

the eyebrows during an epileptic attack to relieve and prevent recurrence.¹⁹

8. **Facial Paralysis (*Laqwa*):** *Zahrawi* recommended cauterizing three key areas-behind the ear, below the temple, and at the corner of the lips-for treating facial palsy.⁶
9. **Melancholia (*Malankhuliya*):** *Ibn Zohr* believed cauterization could be beneficial in managing psychosis related to melancholic states.²⁰
10. **Hemorrhoids (*Bawaseer*):** Hippocrates advised using red-hot iron to burn hemorrhoids until they dried. *Razi* cited a remedy involving burnt sesame seeds for pain relief.²¹
11. **Sciatica (*Irq al-Nasā*):** *Zakariya Razi* suggested that if cupping fails to relieve sciatic pain, cauterization should be done along the thighs, heel, ankle, and the smallest toe for lasting relief.²¹
12. **Inguinal Hernia (*Fataq*):** Celsus in the 1st century AD recommended cauterization for hernia treatment and also described procedures for eye conditions.⁹
13. **Dropsy (*Istisqa*):** *Zahrawi* advised cauterizing the top of the foot, specifically between the fourth and little toe, for treating fluid retention.⁷
14. **Joint and Musculoskeletal Disorders:** Cauterization was found helpful in managing joint and bone issues, such as back pain, hip conditions (coxalgia), and tubercular joints.³
15. **Cancer (Carcinoma):** *Ismail Jurjani* documented his experiences in using cauterization after surgical removal of cancerous tissues, though he noted risks when tumors are close to vital organs.¹¹
16. **Burn Wound Management:** *Zakariya Razi* recommended applying a paste made of wheat flour, water, and olive oil to promote healing of burn scabs.²²

Additional Uses: *Amal-i-Kayy* has also shown effectiveness in treating tumors, earaches, oral fistulas, hip pain, depression, migraines, frequent colds, nosebleeds, pleurisy, stubborn ulcers, and spleen disorders.³

Contraindications^{9,11,15}

1. Severe Anaemia
2. During pregnancy and breast feeding
3. Children and elderly persons
4. Weak, sensitive and weak hearted people
5. Severely ill patients
6. Excessive hot and cold seasons

Effect of Cauterization on Humors

Possible Scientific Explanations^{23,24}

Enhanced Metabolic Activity: According to Van't Hoff's principle, heating tissues accelerates chemical reactions, thereby boosting metabolism. The highest metabolic

activity occurs in the superficial layers where the temperature rise is most significant. This heightened metabolism leads to an increased need for oxygen and nutrients, along with greater production and elimination of metabolic waste.

Impact of Heat on Nerves: Heat has a soothing effect on the nervous system, primarily through stimulation of sensory pathways. Scientific evidence shows that when sensory signals reach the brain at the same time as pain signals, the perception of pain is reduced or blocked. At around 45°C, heat stimulates both skin pain receptors and motor end plates. Since thermal and pain signals travel via similar neural pathways and reach the same brain area, only the stronger signal is perceived. Hence, strong thermal stimulation can suppress the sensation of pain entirely.

Thermal Effects on Body Temperature: Applying the laws of thermodynamics to the human body, the transfer of thermal energy from an external source to tissues raises their internal energy. This activates the body's temperature-regulating system, prompting redistribution of the localized heat. Consequently, vasodilation occurs, improving blood circulation. Based on Van't Hoff's law, every 10°C increase in body temperature significantly elevates basal metabolic rate. The rise in tissue temperature leads to muscle relaxation, easing muscle spasms, inflammation, and associated pain. Warm tissues relax more easily, enhancing this effect.

As blood circulates through the heated tissues, it absorbs the warmth and transports it to other regions of the body. This process stimulates both the vasomotor center and the hypothalamic heat regulation center, resulting in widespread dilation of superficial blood vessels. The resulting vasodilation boosts blood flow to the affected area, aiding in healing and symptom relief.

Limitations and Harmful effects of *Amal-i-Kayy*^{9,15}

Amal-i-Kayy is one of the useful regimens in the Unani system of medicine. It has some harmful effects also, as follows

1. It is not effective in the diseases of *Hār-yābis* nature as it causes *hararat* and *yaboosat* when used.
2. Sometimes, nerves, ligaments, tendons etc, are damaged by doing *Amal-i-Kayy*.
3. *Amal-i-Kayy* is very painful procedure. Severe pain of the therapy is sometime unbearable for sensitive patients.
4. Sometimes, profuse bleeding starts if procedure is not done properly.
5. *Amal-i-Kayy* may be harmful for the brain and covering of the brain.

Procedure of Cauterization²⁵

Pre-procedure

The operation theatre was promptly prepared. The area of the patient's body to be treated should be shaved. All

necessary instruments—such as the cautery tool (*Mikwat*), gauze, cotton, gas stove, and swab-holding forceps—were arranged in advance. A body cleansing (*Tanqiya-e-Badan*) was recommended prior to performing the cauterization (*Amal-i-Kayy*), and patients were advised to consume a light meal beforehand. Written consent was obtained from the patients. The *Mikwat* was heated using a flame. Once in the operating theatre, the affected area was cleaned with gauze or cotton soaked in vinegar. The use of spirit was strictly avoided due to its flammability.

During the Procedure

The affected or diseased area of the patient was examined, and the most painful or tender spots were identified and marked. Cauterization was then carefully performed on the marked areas using a red-hot *Mikwat*. Adequate spacing was maintained between each cauterized point.⁹

Post-Procedure

After cauterization, the wounds were not left exposed to prevent infection, which could complicate the patient's recovery. The following post-care measures were recommended:¹⁵

1. A cloth soaked in a mixture of olive oil (*Roghan-e-Zaitoon*) and egg white should be placed on the wound.
2. If inflammation develops after the procedure, *Zimad-e-Mulayyan* should be applied.
3. Healing or tissue-regenerating medications (*Hābis or Mumbit Advia*) mixed with honey should be used on the wound.
4. If cauterization was done using *Zimād-e-Zararīh*, a soft cloth soaked in cow butter should be applied over the area.^{9,15}

Precautions

1. When medicine fails to treat the disease then only *Amal-i-Kayy* is advisable.^{9,15}
2. *Jālinūs* advised taking gold rod for cauterization because it does not lead to blister formation.¹⁶
3. According to *Hippocrates*, *Amal-i-Kayy* should not be performed in excessive hot and cold seasons.¹¹
4. *Ibn al-Quf* has prohibited the cauterization of nerves, ligaments, tendons, and muscles.¹¹
5. When *Amal-i-Kayy* is needed on more than one place, there should be a sufficient gap between them.⁹
6. *Razi* said that the *Amal-i-Kayy* should be applied over a wide area so that the resulting scab is sufficiently thick and firm and does not easily drop on. To let the scab drop easily it would lead to a serious recurrence of bleeding.¹⁶

Instructions^{9,15}

1. Body detoxification (*Tanqiya-e-Badan*) should be completed before initiating *Amal-i-Kayy*.

2. The site of cauterization must be chosen based on the organ's size and resilience.
3. The *Mikwāt* (cautery tool) must be handled with caution to avoid accidental burns to the practitioner.
4. Bones must not be cauterized under any circumstances.
5. Accurate surface marking should be done before carrying out the procedure.¹¹
6. Precautions against arterial bleeding must be taken during the process, and hemostatic medicines (*Hābis-ud-dam Advia*) should be readily available.
7. Extra caution is required when cauterizing the head, as it may adversely affect the brain and its protective layers.
8. If the head must be cauterized, the procedure should be performed at the center of the scalp.
9. When cauterizing the chest, it should be done between the ribs (intercostal spaces).
10. In cases like pleurisy, the cauterization should be superficial, limited only to the skin's thickness.
11. For conditions such as cold and moist temperament of the liver (*Būrūdat wa Rūtūbat-i-Jigar*) and ascites (*Istisqā-i-Ziqī*), the depth of cauterization should also not exceed the thickness of the skin.
12. The practitioner should be well-versed in distinguishing between necrotic and healthy tissues, so that the diseased parts can be effectively removed without harming the healthy areas.

Complications^{9,26}

1. Excessive swelling and burning at the site of *Amal-i-Kayy*
2. Secretion of fluid from the part of *Amal-i-Kayy*
3. Severe pain
4. Fatigue & Drowsiness
5. Excessive thirst
6. Scar formation
7. Septic shock
8. Skin Abscess
9. Infected blisters
10. Tumor metastasis
11. Hepatic encephalopathy
12. Splenic abscess

Conclusion

Ilāj bi'l Tadbīr plays a vital role in preserving human health. Owing to its minimal side effects, this therapeutic approach is increasingly gaining recognition and popularity worldwide. Cauterization (*Amal-i-Kayy*) in Unani medicine is a traditional therapeutic technique used for the management of various chronic and localized conditions. Rooted in centuries of clinical

practice, it is performed with precision and under carefully controlled conditions to prevent complications and promote healing. The procedure involves the application of a heated instrument (*Mikwat*) to specific areas of the body, based on clinical examination and diagnosis. Proper pre- and post-procedural protocols—including patient preparation, aseptic measures, and the use of Unani formulations for wound care—are crucial for ensuring effective outcomes. When conducted judiciously and in accordance with classical guidelines, cauterization serves as a valuable intervention in the Unani system, reflecting its holistic approach to disease management and healing.

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