

## Abul-Qasim Al-Zahrawy's practice of cupping therapy (Hijama) during the tenth century: a documentation

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### Competing interests

The authors declare no conflicts of interest.

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### Abstract

Abul-Qasim Al-Zahrawy's (Albucasis) (936-1013 AD) was one of the greatest Andalusian scientists and surgeons. Al-Zahrawy illustrated his pioneering medical and surgical information on his book (*At-Tasrif liman 'Azija 'an at-Ta'rif*) or (*The method of medicine*). He illustrated the cupping therapy practice in the treatise 30 of this book. The aim of this article is to give an anthropological and historical medical information about Al-Zahrawy's practice of cupping therapy (Hijama in Arabic). This article is a method of documentations of cupping therapy practice during the 10th century. Safety concerns including innovation cup safety design were the most noticed subjects in practicing cupping therapy by Al-Zahrawy. This attitude should be continued.

**Keywords:** Al-Zahrawy; Albucasis; cupping therapy; Hijama; medical history

**Introduction**

Abul-Qasim Al-Zahrawy’s (Albucasis) was one of the greatest scientists and surgeons in the history of medicine. Abul-Qasim Khalaf Ibn Abbas Al-Zahrawy (the complete Arabic name) was born in 936 AD and died in 1013 AD. He was one of the most famous Islamic medicine and Andalusian scientists, physicians, and surgeons [1].

Al-Zahrawy was a pioneer surgeon. He invented and illustrated more than 200 surgical instruments. Additionally, He developed and illustrated skills and new methods for dentistry, neurosurgery, eye, ear, throat, and other surgeries [2].

Al-Zahrawy illustrated his pioneering medical and surgical information on his book “*At-Tasrif liman ‘Azija ‘an at-Ta’lif* (The Clearance of Medical Science for Those Who Can Not Compile It) or briefly (The method of medicine) [1]. His medical book was a compendium of 30 treatises [3]. The book was completed in 1000 AD and was translated into Latin. *Kitab-Al Tasrif* (The method of medicine) was the main source of learning medicine and surgery in Europe for more than 500 years [4, 5]. The treatise 30 was about surgery [1]. Illustration and description of cupping therapy (Hijama in Arabic) was an important part of this treatise of this leading and pioneering historical medical book.

**Cupping Therapy**

Cupping therapy is an ancient healing practice which was used by various civilizations [6]. Cupping therapy is a corner stone of various traditional healing medical systems such as traditional Chinese medicine (TCM), traditional Korean medicine (TKM), and Unani medicine [6].

There is a growing number of studies in the field of cupping therapy. Cupping therapy was used successfully with promising results in the management of various diseases such as: neck pain [7], nonspecific low back pain [8], Brachialgia paraesthetica nocturna [9], knee osteoarthritis [10], headache and migraine [11], and facial palsy [12].

The aim of this article is to provide documentation of Abu-Qasim Al-Zahrawy’s practice of cupping therapy with a comparison to the

recent practice.

**Results and discussion**

**Types of cups and cupping therapy according to Al-Zahrawy**

Al-Zahrawy mentioned the various types of cups which used in performing cupping therapy and divided them into horns of animals, wood, brass, and glass cups [13].

Recently, a classification of cupping equipment was published in 2018 [6]. The classification of cupping therapy equipment classified cupping therapy into three categories. The first category was categorized according to cups materials which included: glass, plastic, metal, rubber, ceramic, bamboo, and silicone cups. Additionally, the second category was categorized according to the suction methods which included: manual suction (fire and manual pump suction), automatic electrical suction, and self-suction. In addition to the third category which categorized cupping equipment according to their uses which included facial, gliding (massage) cupping equipment, and other cupping equipment [6].

Furthermore, Al-Zahrawy classified cupping therapy types into two categories which were wet cupping and dry cupping. Additionally, he classified dry cupping into two categories which were fire cupping and non-fire cupping. He also described the herbal cupping, and water cupping therapy methods [13].

Recently, classifications of cupping equipment and cupping therapy types were developed and published. Classification of cupping therapy equipment had three categories. The first category was related to the type of cups which included wood, brass, glass, silicon, and plastic cups. The second category was related to the method of suction which included the manual suction cupping set, automatic suction, and fire suction cupping sets. The third category was related to uses of cupping therapy which included facial cupping sets, massage cupping sets, male cupping set, and female cupping set [6]. Furthermore, the classification of cupping therapy types had five categories with more than 20 types of cupping therapy [6].

Figure 1 showed classification of cupping therapy types according to Aboushanab and AlSanad, 2018 [6].

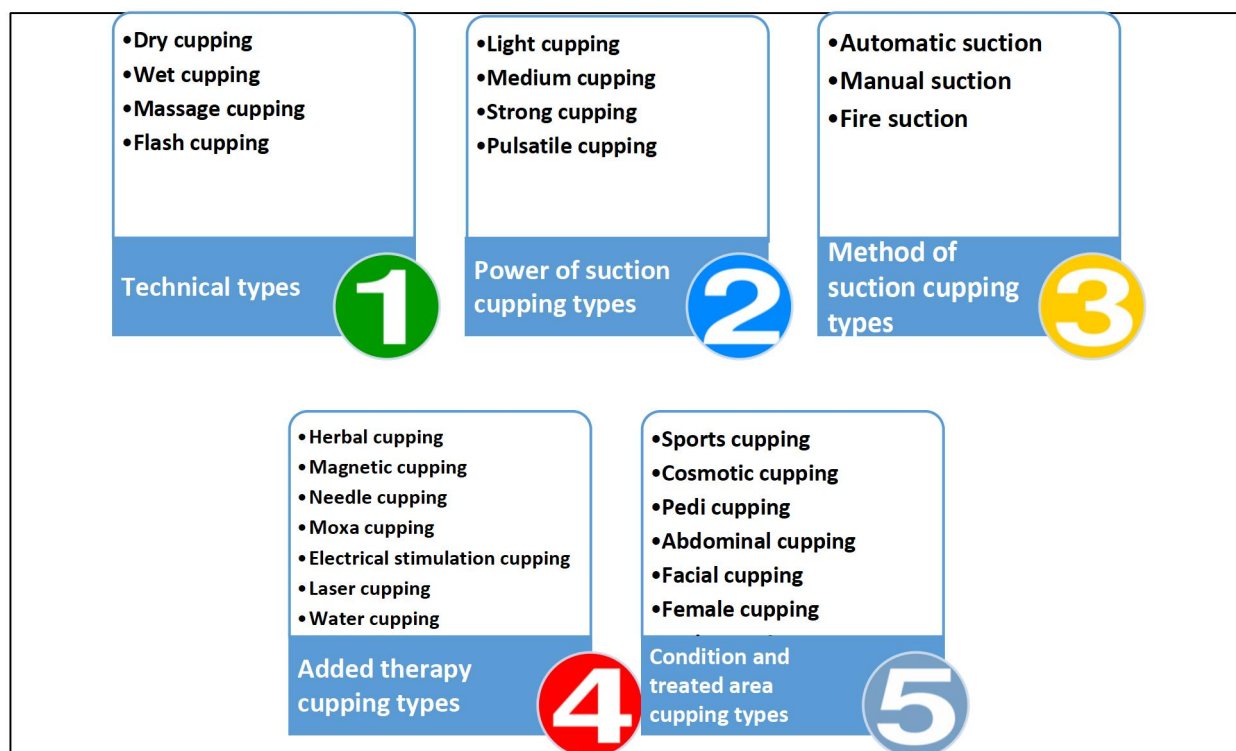


Figure 1 Classification of cupping therapy types according to Aboushanab AlSanad, 2018

**Wet cupping therapy practice according to Al-Zahrawy**

Wet cupping therapy was performed by applying cups after doing superficial skin wounds (scarifications) [14]. There are two methods of performing wet cupping therapy which are: Three steps wet cupping and two steps wet cupping therapy [15]. The three steps wet cupping therapy was described and compared with two steps wet cupping in a published book chapter in 2020 [15]. Three steps wet cupping therapy (Applying cups – performing superficial skin scarification – reapplying cups) is a common method of performing cupping therapy in Arabic and Islamic countries until now [15].

Al-Zahrawy illustrated the steps of performing wet cupping. He illustrated three steps for performing wet cupping therapy. The wet cupping therapy session started by applying a cup on the selected skin point until the therapist noticed the redness of the skin. Then, skin scarifications were performed by doing one, two, or three skin scratches according to the condition of the patient. After that, cups were applied again to collect blood [13].

Additionally, Al-Zahrawy illustrated fourteen points for performing wet cupping practice and described the uses of them [6]. Figure 2 showed the wet cupping therapy points according to the book (The methods of Medicine) and Table 1 showed the characteristics of wet cupping therapy points according to Al-Zahrawy.

Furthermore, some of the illustrated wet cupping therapy points were used in recent studies regarding the use of wet cupping therapy [16-18].

Notably, Al-Zahrawy mentioned the cubital fossa as a point for wet cupping therapy. He alerted therapists to be very careful when performing cupping on this location as injuries to veins and arteries may occur. Recently, wet cupping therapy is contra-indicated directly on blood vessels and nerves for fear of injury [6].

Surprisingly, Al-Zahrawy described the depth of superficial scarification to be equal to the depth of skin [13]. The depth of

scarification was described and suggested in previous published paper to be equal the depth of the epidermis layer of the skin = 0.1 mm [14]. Interestingly, there were reported histological changes of whole skin layer after wet cupping which were prescribed by a published article in 2012 [14].

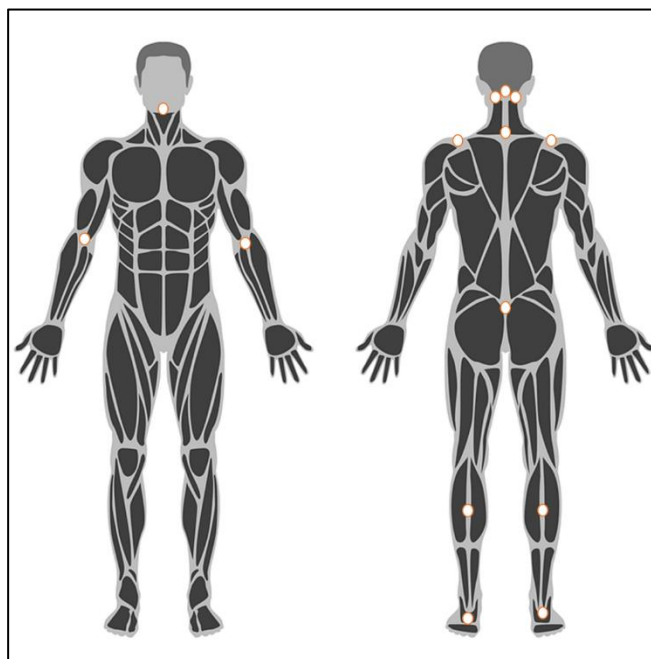


Figure 2 Wet cupping therapy points according to Al-Zahrawy

Table 1 Characteristics of wet cupping therapy points according to Al-Zahrawy

Point name	Number	Location	Uses	Precautions
Nakrat- El-Kafa (Occipital groove)	1	Just below the external occipital protuberance	Head diseases	Not for elderly. Continuous cupping on this point may lead to forgottenness
Al-Kahel (Base of the neck)	1	At the base of the neck at 7Th cervical vertebrae.	Asthma, Cough, chest diseases	Therapist may select slightly higher point.
Al-Akhdaeen (beside two jugulars)	2	2 bilateral points on the side of the neck (near external jugular veins)	Eye disease, and head pains	Be very careful to not injure the jugulars which may lead to fainting or death.
Al-Zakn (Chin)	1	Under the jaw	Oral diseases	-
Al-Katfeen (Shoulders)	2	2 points, one at each shoulder.	Palpitation	-
Al-Zendin (The two cubital fossae)	2	2 points on each arm at the cubital fossa	Many diseases	Be very careful as injury to veins, nerves and arteries may occur
Al-Osos (Coccyx)	1	The coccyx is at the last part of spinal column	Hemorrhoids, and ulcers	Use brass cups instead of glass cups to have more suction inside the cup.
Al-Thaqeen (Two legs)	2	On legs, he did not mention exactly the position	Chronic pains, uterus and bladder conditions, and abscesses	Very exhausting and may lead to fainting.
Al-Arqobin (Two Achilles tendons)	2	Cupping on Achilles tendons	Same as cupping on legs	-

### Dry cupping therapy practice according to Al-Zahrawy

Dry cupping was performed by applying cups on selected skin points without puncturing or doing skin scarifications using manual suction pump or fire [15].

Furthermore, Al-Zahrawy illustrated the locations (points) of performing dry cupping therapy in his book (*The Methods of Medicine*). Cups can be applied without scarifications on the anatomical locations of liver, spleen, breasts, abdomen, umbilicus, kidneys, and acetabulum [13]. Figure 3 illustrated the dry cupping therapy points mentioned by Al-Zahrawy.

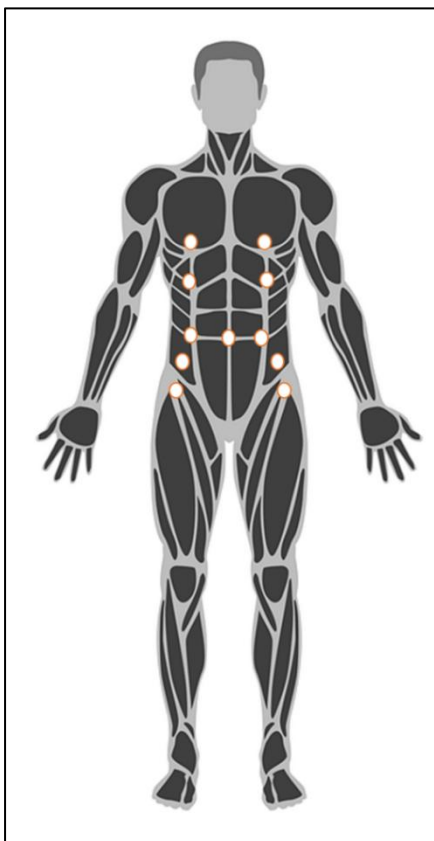


Figure 3 Dry cupping therapy points according to Al-Zahrawy

Additionally, he prescribed the use of dry cupping on breasts location for the treatment of bleeding conditions and on kidneys locations for treating kidney stones [13]. Interestingly, a new preliminary clinical trial reported the effect of dry cupping under breasts to decrease vaginal bleeding (Menorrhagia) [19]. Another clinical trial reported the excretory effect of cupping therapy on the kidneys and its ability to decrease heavy metals from blood [20]. Furthermore, wet cupping can enhance renal functions as reported by another preliminary clinical trial [21]. More clinical trials should be conducted to confirm or deny these results.

### Design of innovative cups by Al-Zahrawy

As an innovation design, Al-Zahrawy illustrated a design of a cup which can be used easily for performing dry fire cupping therapy and protecting the patient from burn [13].

The cup was made from brass, with wide rims to be comfortable for the patients. There is a metal brass shaft inside the cup which can be used to put the fire cotton pole, or the candle. By using this cup, the fire direction should be towards the bottom of the cup which should protect the patient from any harm or burn. The cup had an air opening, which can be used by the therapists to close it by a finger after applying a fire method to perform suction or open it by moving the finger to remove the cup easily without any harm or pain to the patient [6]. Figure 4 showed the innovative fire cup design by Al-Zahrawy.

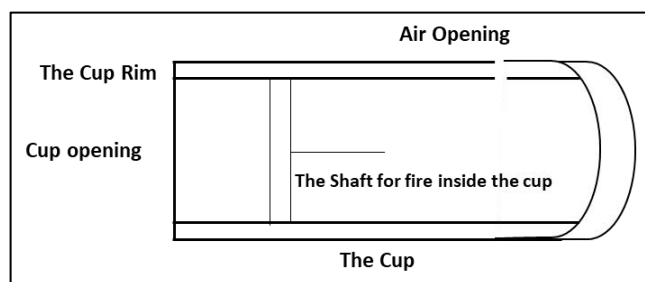


Figure 4 Innovative fire cup design by Al-Zahrawy

This was a unique cup design which could improve performance and safety of fire cupping therapy type. It could protect the patients from accidental burn which might be associated with fire cupping therapy. Burns from fire cupping therapy were reported in medical literature [22].

The wide rim of cups was recommended by previously published study about cupping therapy from a biomechanical perspective [23]. The study reported that cups with wide rims were more comfortable and protect the skin of patients [23].

### Recent advances of cupping therapy

Research studies and interest in evaluation of cupping therapy efficacy and safety are growing [24]. A Quality tool for ensuring safety in cupping therapy clinics was developed [25]. International standards for ensuring quality and safety of cupping therapy equipment were developed by International Organization for Standardization (ISO) [15].

Many systematic reviews reported the benefits of using cupping therapy in the management of various diseases [26-28]. There are a growing interest in use of cupping therapy by athletes and controversial evidences regarding this use [29, 30]

### Conclusion

In conclusion, Al-Zahrawy was a great Andalusian scientist and surgeon. His book “The methods of medicine” was a leading historical medical book which illustrated cupping therapy. This article documented the practice of cupping therapy according to Al-Zahrawy during the 10th century as illustrated in his book “*The Methods of Medicine*”. Safety concerns including innovation safety cup design were the most noticed subjects in practicing cupping therapy by Al-Zahrawy. This attitude of providing safe cupping therapy treatments should be continued. There is a need for more research in the history of cupping to illustrate and document the ancient roots of cupping therapy. There is also a need for more clinical trials to evaluate the efficacy and safety of the historical uses of cupping therapy.

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