



## Effectiveness of Dry Cupping Therapy in the Management of Uterine Fibroid: A Case Report

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### Abstract

Uterine fibroid is considered as the most common pelvic tumor in women during their reproductive years. Symptomatic uterine fibroids can cause abnormal uterine bleeding, anemia, pressure symptoms and fertility issues and also have a significant influence on patient's quality of life. These are the most common indications for hysterectomy worldwide. We report a 43-year-old woman with abnormal vaginal bleeding and dysmenorrhea due to large size of uterine leiomyoma which was candidate for myomectomy. Due to her virginity she couldn't undergo uterine surgery. She preferred to use non-surgical treatments and presented to our traditional Persian medicine outpatient clinic. In order to control menorrhagia and dysmenorrhea, dry cupping therapy was recommended to her for three times a week. After a period of two months, dysmenorrhea and vaginal bleeding were decreased noticeably. In addition, a significant reduction in tumor size was observed. This case shows dry cupping therapy can be effective and safe in decreasing fibroid-related symptoms like dysmenorrhea and excess bleeding and also the size of fibroid. It seems that this method can be integrated with current therapeutic approaches. However, further clinical studies need to establish the efficacy and safety of dry cupping therapy for the management of uterine fibroids.

**Keywords:** Complementary medicine; Dry cupping; Integrative medicine; Traditional medicine; Uterine fibroid

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## Introduction

Uterine leiomyoma or fibroid is recognized as the most common gynecological disease in women during childbearing age [1,2]. Its prevalence rate among the women aged over 35 years is estimated about 25% worldwide [1].

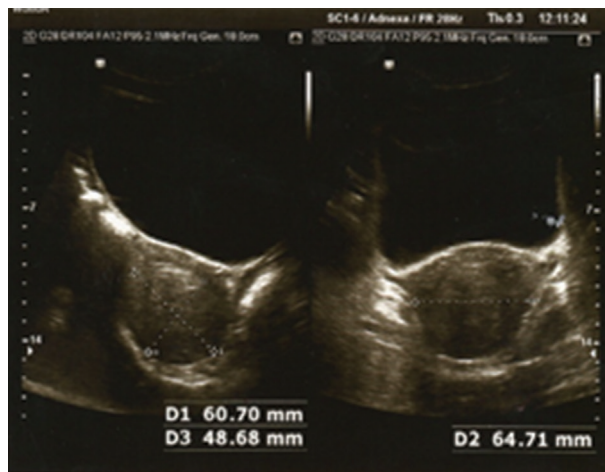
The majority of these affected women do not require any treatment because they do not show the noticeable clinical manifestations and are diagnosed incidentally, however, symptomatic fibroids have a significant influence on patient's quality of life including sexual life, performance at work, also their relationships and family. The severity of these symptoms varies individually and the most common ones may include abnormal uterine bleeding, anemia, pressure symptoms (pelvic pressure/pain) and fertility issues [3,4]. In symptomatic patients, medical therapy is considered as an effective option, although this approach has limited effects. Currently, symptomatic uterine fibroids are the most common indication for hysterectomy around the world [2-4]. Many women try to find uterus-preserving surgeries (UPS), nonsurgical treatments and complementary and alternative medicine (CAM) [4]. Recent data demonstrates that there is a growing trend towards using of both conventional and CAM treatments in these patients [4,5]. Dry cupping therapy is a well-known CAM practice which has been widely used in different countries such as China, Iran, and India [6-8]. During this procedure, several cups are placed on the specific areas of the

body surface for 15 to 20 minutes, once or twice daily to create a vacuum without skin trauma or bleeding. It is currently prescribed for the treatment of many disorders [6,7]. The therapeutic effects of cupping therapy in the management of abnormal uterine bleeding and dysmenorrhea has been explained in traditional Persian and Chinese medicine as well [6,8-10].

In this article, we present a female patient who had heavy vaginal bleeding and painful periods due to uterine fibroid, she obtained successful outcome by dry cupping therapy in terms of dysmenorrhea and vaginal bleeding in the traditional Persian medicine (TPM) outpatient clinic. Moreover, a considerable reduction in fibroid size was observed at the end of the treatment.

## Case presentation

A 43-year-old single female patient with no significant medical history presented to the TPM outpatient clinic with complaints of abnormal vaginal bleeding and dysmenorrhea for one-year duration. Her menarche has begun around 12 years old, she had regular periods with no abnormal bleeding until one year ago. Recently, she experienced heavy bleeding and painful periods. One month after symptoms onset, gynecological visit was performed and medical treatments e.g. OCPs and NSAIDs were prescribed. In the physical examination her pulse rate and blood pressure were normal, the laboratory tests revealed hemoglobin level was normal, also pregnancy test was negative.



**Figure 1.** Pelvic ultrasonography revealing a large intramural uterine fibroid measuring about 64×60×48 mm in diameter.



**Figure 2A.** Pelvic ultrasonography after the end of treatment showing decrease in fibroid size



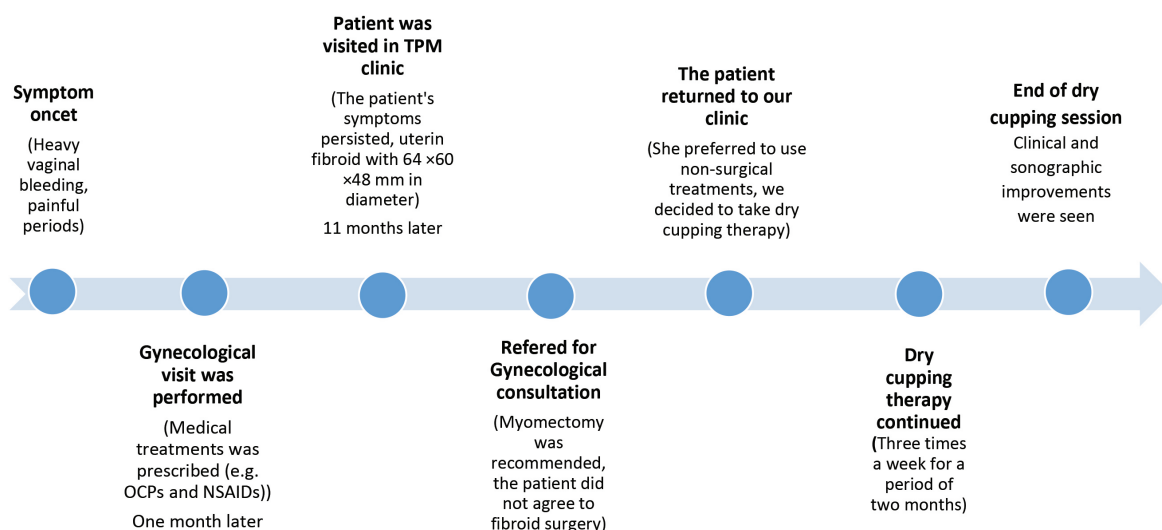
**Figure 2B.** Large size cups are placed on the lower line between pubis and abdomen

Pelvic ultrasonography showed a large intramural uterine fibroid with pressure effect on myometrium and soft tissue tumor were 64 ×60 ×48 mm in diameter (Figure 1). Gynecological consultation was performed, finally, she was a candidate for myomectomy due to the large size of tumor and excessive bleeding. However, she did not agree to undergo fibroid surgery, since she was not married and preferred to use non-surgical treatments such as complementary and alternative medicine.

In order to control menorrhagia and dysmenorrhea, we decided to take dry cupping therapy for her, the course of the treatment was as follows: four large size of glass cups with 5.5 cm in external diameter were placed on the abdominal wall between the umbilicus and the pubis for 10 minutes, after certain interval of time, seven large cups with an external diameter of 7 cm were applied around the umbilicus and then be moved throughout

the skin toward the flanks which called sliding cupping, finally, after a short time, five cups with 7cm in external diameter are putted on her back behind of uterus for 15 minutes. Each cup was initially heated separately using a direct flame to create a vacuum. Ultimately, they were gently removed from the skin.

The treatment continued three times a week for a period of two months. The patient was satisfied with the cupping therapy and did not report any side effects during the course of treatment. After the end of the treatment, dramatic clinical and sonographic improvements were seen. The patient clarified that during menstruation, dysmenorrhea and vaginal bleeding decreased noticeably. Also, follow up pelvic ultrasound revealed considerable reduction on fibroid size and soft tissue tumor measuring 45×49 mm in diameter (Figure 2). Timeline of management course is shown in Figure 3.



**Figure 3.** Timeline of management course

## Discussion

The uterine fibroids are asymptomatic in the majority of cases and no need to further investigations, however, each patient with uterine fibroids may have variety of complications including menstrual abnormalities, anemia, painful menstruation, infertility and secondary degenerative changes [3,4,11,12]. Medical therapy in those symptomatic patients have limited efficacy and some common side effects as well; therefore, surgical treatment options including hysterectomy and uterus-preserving surgeries (myomectomy, uterine artery embolization and endometrial ablation) are indicated. Although hysterectomy is considered as the only definitive treatment, it may be accompanied with significant complications, mortality, and economic burden. Moreover, among those women who wish to preserve their uterus and also fertility, hysterectomy is not a desirable solution, accordingly, they look for CAM treatments including dietary recommendations, medicinal herbs, homeopathy and acupuncture.

Recent data shows that these nonsurgical managements have few side effects and significant improvements in fibroid-related symptoms [2-5,11]. A previous case report of successful outcome of acupuncture treatment in terms of fibroid size reduction, menorrhagia, chronic pelvic pain and anemia has been published [11]. Dry cupping has a long history practice in the treatment of a broad range of medical conditions among many communities. In hot dry cupping each glass cup was held upside down on an open flame until the

air inside warm up, it was then placed on the skin. As the air inside the cup cooled, a vacuum was created due to a negative pressure and the skin is pulled into the cup without scarifications [7,13].

According to the TPM, cupping therapy has a favorable effect on improvement of uterus and ovaries functions which is recommended for their related diseases [6-8]. In this method, several dry cups are placed on the skin of the anterior abdominal wall between the umbilicus and the pubis once or twice a day, it is recommended that the cupping therapy should be continued for seven to ten days [6]. Several theories have been proposed to describe possible therapeutic effects of cupping therapy. It increases in endogenous opioid production which can induce comfort, muscle relaxation and pain reduction. It has also been found that cupping increases blood flow to the skin and muscles, stimulates the peripheral and autonomic nervous systems, and modulates the immune system and hormonal adjustments [13]. In a number of clinical studies, it is shown that dry cupping can reduce significantly pain intensity in dysmenorrhea and also decrease the amount of menstrual bleeding in menorrhagia [8-10]. There is an evidence suggests that excessive production of endometrial prostaglandins (PGs) are associated with increased myometrial contraction and constriction of uterine arteries with subsequent tissue ischemia which finally leading to dysmenorrhea [8,10].

Cupping therapy appears to be effective for suppression of these endometrial PGs and

releasing the beta endorphins which produce endogenous analgesia in the blood flow, consequently improves dysmenorrhea [8,10]. Also, cupping stimulates of pain receptors and increases the frequency of impulses, ultimately close the pain gates and reducing of the transmission of pain signals [13].

Dry cupping can divert blood flow away from the pelvic area and decreases the congestion in this area especially the uterus and suppresses the PGs, finally reduces the menstrual bleeding [9].

Despite the possibilities of the favorable effects of cupping therapy on management of fibroid-related symptoms such as abnormal bleeding and dysmenorrhea, there is no published report in this subject. Our case report as the first one in the literature demonstrated successful outcome of cupping therapy in decreasing fibroid-related symptoms and the size of fibroid. However, its exact mechanism of action is not fully known.

In conclusion, dry cupping therapy is a non-invasive, available and cost-effective method which can decrease fibroid-related symptoms like dysmenorrhea and excess bleeding and also the size of fibroid. It seems that this method can be integrated with current therapeutic approaches for women who want complementary nonsurgical treatment, although further clinical studies in a large population and long term follow up are needed to establish the efficacy and safety of dry cupping therapy for the management of uterine fibroids.

## Patient consent

Informed consent was obtained from the subject of this case report before submission of the report and associated images. According to our Institutional Review Board, dry cupping was approved as a non-invasive and routine modality which no need the registration code.

## Author Contributions

E.A., M.H.A., S.R., and M.D. contributed to the case report design. E.A. was the physician in charge who provided the patient's information and collected the data. M.D. was the principal author of the paper. E.A. and M.D. supervised the report and the publication process.

## Conflict of Interest

The authors have no conflicts of interest to declare.

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