



## Wet Cupping and Phlebotomy in Management of Oligo/Amenorrhea: View of Persian Medicine

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### Abstract

Oligo/amenorrhea is one of the most common women's complaints. The most frequent pathologic causes of this condition is polycystic ovaries that leads to unovulatory cycles. Because of insufficiency of treatment in conventional medicine, we studied view point of Persian Medicine. We searched main Persian Medicine references to collect important information about wet-cupping and phlebotomy in treatment of oligo/amenorrhea especially in patients with Polycystic Ovarian Syndrome. For gathering evidence that establish this idea, we searched main English and Persian language databases for studies about effectiveness of wet-cupping and phlebotomy on menstruation. Excretion blood from lower extremities especially saphenous vein phlebotomy and calves wet-cupping while massive blood excreting is recommended by Persian physicians in Ehtebas-e-tams (oligo/amenorrhea). From the 106 citations identified from electronic searches, at beginning, 3 ones meet our study objectives. These articles showed that wet-cupping effect on menstruation in women with PCOS and fertilization. Although any study didn't find about effectiveness of phlebotomy on menstruation or fertilization, but majority studies show effect of phlebotomy or blood donation on decrease of insulin resistance. More research about treating this condition needed to confirm the affectiveness of phlebotomy or wet-cupping in treatment of oligo/amenorrhea.

**Keywords:** Stein leventhal syndrome; Venesection; Hijama; Persian medicine

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## Introduction

Amenorrhea is considered as the absence of menstruation for three months in women that had regular menstruation or for six months in women with an irregular menstruation [1] and oligomenorrhea considered as menstrual cycle takes 35-90 days [2]. In the reproductive period, the most frequent pathologic cause of oligo-amenorrhea is Polycystic Ovary Syndrome (PCOS); a prevalent reproductive endocrinopathy with prevalence of 5-15% among reproductive aged women [3]. This is a complex condition that diagnosed with irregular menstruation, hyperandrogenism and polycystic ovarian morphology [4]. This syndrome has several non-reproductive manifestations including metabolic disturbances such as diabetes, obesity and metabolic syndrome [5]. Nowadays the key roles of insulin resistance and hyperandrogenism in pathogenesis of PCOS is well known [6,7]. About 70% of PCOS women are insulin resistance [8]; however, the primary pitfall has not been recognized yet; as a result, there is no definite treatment option in term of cure, so treatment modalities are symptom based. Besides the lack of cure, the longtime use of this medication are not safe and is associated with several adverse effect. Because of insufficient treatment and many unwanted complications in conventional medicine, alternative medicine is noticed recently [9]. Persian Medicine (PM) or Iranian Traditional Medicine as Unani Medicine is one of the oldest medical paradigms in the world that

is based on humoral medicine [10]. In this form of medicine, the health is founded on equilibrium of four humors in body. If one of humors increase or decrease, disease is begun [11]. There are many natural pathways to create this balance such as defecation, perspire and menstruation that lead to exert the waste matters from body [12]. If menstruation is dropped in anyway, the overload of excreted materials can cause different disorders [13]. In PM “Ehtebase tams” is the closest term to amenorrhea [14]. The most distemperament that cause Ehtebase-tams is dominant of coldness with viscosity. This condition may create many other disorders such as obesity, fatty liver and cardiovascular diseases that may be attribute PCOS [15-17]. In this viewpoint, there are nutritional, pharmacological and non-pharmacological intervention in management of amenorrhea. Nutritional and pharmacological intervention are described in other studies [17-19]. Phlebotomy and wet-cupping are two important non-pharmacological curative ways that recommended [16]. Phlebotomy (which named Fasd in PM) is an important treatment that restores the equilibrium through bleeding from veins. In this technique inappropriate humours excreted through the gap in the vessel by a sword [20]. Wet-cupping (Hijamat in PM) is the process of using a vacuum on surface of the body, along with the use of incisions, to remove capillary blood. By this minimal procedure the harmful substances are removed [21-23]. This study is a review about the details of

wet-cupping and phlebotomy in treatment of amenorrhea (especially PCOS) in view point of Persian Medicine texts and compare with new research.

## Methodology

In this study, several main and famous Persian Medicine references were studied to collect important information about amenorrhea which include *kanon fi al-Teb -Canon of Medicine-* (written by Avicenna, 10th to 11th centuries), *Al-hawi fi al-Teb – Liber continents-* (written by Rhazes, the most prominent clinician of the Persian Medicine, 9th to 10th centuries), *Kamil al-Sina fi Tibbiya -The Perfect Book of the Art of Medicine-* (written by Ali ibn Abbas Ahvazi, also known as Haly Abbas, 10th to 11th centuries), *kholasat Al Hekmat-Gist of medicine-* (written by Aghili khorasani shirazi 17th century) and *Exir e Azam -Great Elixir-* (written by Azam Khan, 19th Century). We searched the terms: *hijamat* and *fasd* in non-pharmacologic (*amal-e-yadavi*) chapter and *Ehtebas-e-tams* (amenorrhea) chapter. Then, we conducted a review and searched PubMed, Scopus, Google Scholar, and Science Direct for English language studies and SID, Magiran for Persian language studies documented from inception through to July 2017. Investigating *hijamat* and *fasding* using MeSH terms either, including “*phlebotomy, venesection, blood donation*” and “*wet cupping, hijama*” with “*amenorrhea* and *polycystic ovarian syndrome*”. The searches were restricted to

English and Persian published papers.

## Results

According to Avicenna's point amenorrhea is described under title *Ehtebas-e-tams* and is defined as cessation of menstruation or menstrual flow at intervals of more than 30 days or decrease of amount of bleeding through menstruation [24,25]. Irrespective of physiological condition is divided to anatomical and functional disorders. Some anatomical disorders can cause obstruction in uterus or uterine vessels. Functional disorders are due to disequilibrium in four temperaments which are cold and dry dystemperament with excess of black bile, cold dystemperament with excess of phlegm and overt obesity especially abdominal obesity.

All above-mentioned physicians believed that *fasd* (phlebotomy) and wet-cupping have important therapeutic roles in this group of patients especially in obese women [25-28].

## Site, time and amount of bleeding

Persian physicians recommended *fasd* or wet-cupping from various veins/sites for different purposes and diseases maybe by reason of vicinity or participatory with inflamed member/organ [29]. Since lower limbs are in line with uterine (*mohazat*), these mini-surgical procedures are recommended from lower limbs to motivate uterine bleeding in oligo/amenorrhea. It is also recommended that these are done two or three days before time of her habitual vaginal bleeding to stimulate

natural uterine bleeding [25-27].

### *Phlebotomy*

This method of bloodletting is recommended through saphenous vein or popliteal vein while standing up. The physician must pay attention to her stability and prepare necessary equipment.

### *Wet-cupping*

Wet-cupping over calves muscles (4 fingers below knee and poster-lateral of calf) or talus bone (among lateral malleolus and heel) is recommended. Calves wet-cupping must be done after warm bathing with sitting position on the chair or standing up, repeated suction (thirty times) and with due attention to patient condition, massive blood volume (150-300cc (50-100 *derham*) must be excreted through deep incisions [28]. They mentioned that the physicians should be aware about patient syncope in this procedure as complication [25-29].

## **Current studies**

The literature searches revealed 106 articles, of which 103 studies had to be excluded. The majority (n = 94) was excluded due to ineligibility and repeated from reading title/abstract and full text of the 12 articles retrieved. At last, 3 articles included and rest of articles (n = 9) were excluded after retrieving their full text and evaluating their methods (descriptive or narrative reviews articles were excluded). Two clinical trials and one case study evaluated in this study.

All of three studies investigate the effect of wet-cupping on menstruation or fertility. We didn't find any clinical research about effect of phlebotomy on menstruation directly.

Studies showed that wet-cupping can effect on ovulatory cycle. Abduljaber through a clinical trial study showed wet-cupping monthly in 59 infertile women lead to 12 (20%) pregnancy during 2-6 months and their serum LH and FSH level before and after intervention significantly decreased. Wet cupping was done in 13 different points of the participants' bodies that had been candidate for artificial reproductive techniques (ART) at second day of menstruation [30]. There wasn't comparison group and the cause of infertility and habit of menstruation has not been demonstrated in this study.

Praveen in a clinical study divided 40 PCOS participants with delay menstruation randomly to two groups. She recommended only herbal medicine drug in control group and herbal medicine drug with wet-cupping over the calves muscles at second and fourth days of treatment. Her study demonstrated that wet-cupping with herbal medicine drug is significantly more effective than herbal medicine drug single on menstruation in PCOS patients [31].

Also Begum in a case study showed repeated wet-cupping lead to recuperation of PCOS. In this study a woman aged 28 years with cycle menstruation more than 4 months due to polycystic ovarian syndrome treated by wet-cupping weekly over the calf muscles. After 8 sessions wet-cupping, menstruation

occurred monthly and pelvic scan showed recuperation of ovaries [32]. Whereas this study showed noticeable improvement in treatment of polycystic ovarian, this isn't enough for judgment and RCTs need to be done.

## Discussion

This review study showed that thousands years ago Iranian physicians confirmed that phlebotomy and calves wet-cupping are therapeutic options in oligo-amenorrhea especially in PCOS. Furthermore, these procedures recommended for managing of PCOS related disease such as diabetes especially onset of disease [33]. Recent studies demonstrate efficacy of wet-cupping on regulating menstruation or fertilizing, though that methods of wet-cupping in these studies have not been similar.

However, we didn't find any research about effect of phlebotomy on menstruation, we found many studies about effectiveness of phlebotomy in management of metabolic disorders and diabetes that related to PCOS. A significant decrease in insulin resistance has been established in diabetic patients who donate blood 3 times (500 ml per time) during 4 months [34]. Facchini showed that blood donation in patients with nonalcoholic hepatitis result decrease of insulin concentration [35]. Another research demonstrated that blood donation can prevent diabetes in the thalassemia [36,37]. Other research demonstrate long term phlebotomy

can decrease the risk of new-onset diabetes in chronic hepatitis patients [38]. Nowadays it is known that insulin resistance interrelated with the most patients with polycystic ovarian syndrome and insulin resistance will be broken with blood donation.

Considering the explained these manipulations, it seems that amount of blood excreted must be massive that conceives decrease of serum iron. Recent studies show reducing of serum iron can lead insulin resistance to decrease, which confirm Persian physicians' viewpoints. On the other hand, a few studies show that wet-cupping apart from amount of blood excreted is effective in ovulatory cycle, decrease of blood sugar, glycosylated hemoglobin and temporary serum Iron [23,39-40]. Thus wet-cupping and phlebotomy could be notable and more studies are needed to explain the effectiveness, mechanism and relationship of phlebotomy and wet-cupping in treatment of PCOS.

## Conflict of Interest

None.

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## References

- [1] Practice Committee of the American Society for Reproductive Medicine. Current evaluation of amenorrhea. *Fertil Steril* 2004;82:266-272.



- [2] Speroff L, Glass RH, Kase NG. Clinical gynecologic endocrinology and infertility. 18th ed. Lippincot wil-lims & wikins & Wolters Kluwer. Baltimore 2011.
- [3] March WA, Moore VM, Willson KJ, Phillips DI, Norman RJ, Davies MJ. The prevalence of polycystic ovary syndrome in a community sample assessed under contrasting diagnostic criteria. *Hum Reprod* 2010;25:544-551.
- [4] Fauser BC, Tarlatzis BC, Rebar RW, Legro RS, Balen AH. Consensus on women's health aspects of polycystic ovary syndrome (PCOS) in: the Amsterdam ESHRE/ASRM-Sponsored 3rd PCOS Consensus Workshop Group. *Fertil Steril* 2012;97:28-38.
- [5] Setji TL, Brown AJ. Polycystic ovary syndrome: update on diagnosis and treatment. *Am J Med* 2014;127:912-919.
- [6] Moghetti P. Insulin resistance and polycystic ovary syndrome in. *Curr Pharm Des* 2016;22:5526-5534.
- [7] Layegh P, Mousavi Z, Farrokh tehranu D, Parizadeh S, Khajedaluae M. Insulin resistance and endocrine-metabolic abnormalities in polycystic ovarian syndrome: Comparison between obese and non-obese PCOS patients. *Inter J Reprod Biomed* 2016;14:16-18.
- [8] Choudhary S, Binawara BK, Mathur KC. Insulin resistance and polycystic ovary syndrome. *Pak J Med Res* 2012;51:63.
- [9] Arentz S, Abbott JA, Smith CA, Bensoussan A. Herbal medicine for the management of polycystic ovary syndrome (PCOS) and associated oligo/amenorrhoea and hyperandrogenism; a review of the laboratory evidence for effects with corroborative clinical findings. *BMC Complement Altern Med* 2014;14:511.
- [10] Mojtabae M, Mokaberinejad R, Adhami S, Mansouri P, Rahbar M. Nutritional Advice for Patients with Melasma in Iranian Traditional Medicine. *Journal of Skin and Stem Cell* 2016;3: 14-15.
- [11] Emtiazy M, Keshavarz M, Khodadoost M, Kamalinejad M, Gooshahgir SA, Shahradsaj H, Hashem Dabaghian F, Alizad M. Relation between body humors and hypercholesterolemia: An Iranian traditional medicine perspective based on the teaching of Avicenna. *Iran Red Crescent Med J* 2012;14:133-138.
- [12] Shiekh Roshandel H, Ghadimi F, Shiekh Roshandel R. Developing and standardization of a structured questionnaire to determine the temperament (Mizaj) of individuals, *Indian J Tradit Knowle* 2016;15:341-346.
- [13] Tansaz M, Mokaberinejad R, Bioos S, Sohrabvand F, Emtiazy M. Avicenna aspect of premature ovarian failure. *Int J Reprod Biomed* 2013;11:167-168.
- [14] Mokaberinejad R, Zafarghandi N, Bioos S, Hashem Dabaghian F, Naseri M, Kamalinejad M, Amin Gh, Ghobadi A, Tansaz M, Akhbari A, Hamiditabar M. Mentha longifolia syrup in secondary amenorrhea: a double-blind, placebo-controlled, randomized trials. *DARU J Pharm Sci* 2012;20:1-8.
- [15] Mokaberinejad R, Akhtari E, Tansaz M, Bioos S, Kamalinejad M. Effect of Mentha longifolia on FSH Serum Level in Premature Ovarian Failure. *Open J Obstet Gynecol* 2014;4: 354-356.
- [16] Firdose KF, Shameem I. An approach to the management of poly cystic ovarian disease in Unani system of medicine: A review. *International Journal of Applied Research* 2016; 2:585-590.
- [17] Hosseinkhani A, Asadi N, Pasalar M, Zarshenas MM. Traditional persian medicine and management of metabolic dysfunction in polycystic ovary syndrome. *J Tradit Complement Med* 2017;3:1-7.
- [18] Tansaz M, Bahmani M. Principles of Nutrition in Patients with Polycystic Ovary Syndrome in Iranian Traditional Medicine and Comparison with Modern Medicine. *Iran J Med Sci Supplement* 2016;41:s49.
- [19] Ghobadi A, Amin G, Shams-Ardekani MR, Kamalinejad M, Mokaberinejad R. Plants used in Iranian traditional medicine for the treatment of oligomenorrhea. *Advances in Environmental Biology*. 2014;8:52-55.
- [20] Kordafshari G, Ardakani MRS, Keshavarz M, Esfahani MM, Nazem E. The Role of Phlebotomy (Fasd) and Wet Cupping (Hijamat) to Manage Dizziness and Vertigo From the Viewpoint of Persian Medicine. *J Evid Based Complementary Altern Med* 2017;22:369-373.
- [21] Akhtar J, Siddiqui MK. Utility of cupping therapy Hijamat in Unani medicine. *Indian J Tradit Knowle* 2008;7:572-574.
- [22] Ghods R, Sayfour N, Ayati MH. Anatomical features of the interscapular area where wet cupping therapy is done and its possible relation to acupuncture meridians. *JA Cupunct Meridian Stud* 2016;9:290-296.
- [23] Mahdavi MRV, Ghazanfari T, Aghajani M, Danyali F, Naseri M. Evaluation of the effects of traditional cupping on the biochemical, hematological and immunological factors of human venous blood. *A compendium of essays on alternative therapy* 2012;6:67-88.
- [24] Mokaberinejad R, Zafarghandi N. Etiology and semiology of amenorrhea in the traditional iranian medicine. *Journal of Islamic and Iranian Traditional Medicine*. 2012;3:19-30.
- [25] Ibn-e-sina (Avicenna Husain). *Al-Qanun fit-tib* . 1th ed. Vol 3. Alaalami Beirut library Press. Beirut 2005.
- [26] Razi MZ. *Al-Hawi fi'l-tibb* [Comprehensive book of medicine]. 1th ed. Vol 3. Osmania Oriental Publications Bureau, Hyderabad 1968.

- [27] Azam khan Chashti M. Exir-e-Azam [Great Elixir]. 1th ed. Vol 3. Research Institute for Islamic and Complementary Medicine, Tehran 2008.
- [28] Ahwazi Arjani AA. Kamel al-Sanaah al-Tibbiyah [The Perfect Art of the Medicine], 1th ed. Vol 3. Astan-e Quds-e Razavi. Mashhad 2008.
- [29] Aghili khorasani MH. Kholasa't ol Hikma'(persian) 1th ed. Vol 2. Ismaelian. Qom. 2005.
- [30] Abduljabbar H, Gazzaz A, Mourad S, Oraif A. Hijama (wet cupping) for female infertility treatment: a pilot study. *Int J Reprod Contracept Obstet Gynecol* 2016;5:3799-3801.
- [31] Parveen R, Shameem I. Effect of wet cupping (Hijamat Bil Shurt) in the management of secondary amenorrhea (Ehtebas Tams Sanwi). *Research and reviews. Journal of Unani, Siddha and Homeopathy.* 2014;1:12-19.
- [32] Begum W. Treatment of polycystic ovarian syndrome by wet cupping – a case report and review of literature. *Journal of Ayurveda and Holistic Medicine (JAHM).* 2015;3:41-45.
- [33] Zarshenas MM, Khademian S, Moein M. Diabetes and related remedies in medieval persian medicine. *Indian J Endocrinol Metab* 2014;18:142.
- [34] Fernández-Real JM, Peñarroja G, Castro A, García-Bragado F, López-Bermejo. Blood Letting in High-Ferritin Type 2 Diabetes Effects on vascular reactivity. *Diabetes care* 2002;25:2249-2255.
- [35] Facchini FS, Hua NW, Stoohs RA. Effect of iron depletion in carbohydrate-intolerant patients with clinical evidence of nonalcoholic fatty liver disease. *Gastroenterology* 2002;122:931-939.
- [36] Olivieri NF, Brittenham GM. Iron-chelating therapy and the treatment of thalassemia. *Blood* 1997;89:739-761.
- [37] Dmochowski K, Finegood DT, Francombe W, Tyler B, Zinman B. Factors determining glucose tolerance in patients with thalassemia major. *J Clin Endocrinol Metab* 1993;77:478-483.
- [38] Mifuji-Moroka R, Iwasa M, Miyachi H, Sugimoto R, Tanaka H. Iron overload and glucose abnormalities in chronic hepatitis C virus infection: phlebotomy lowers risk of new-onset diabetes. *Hepatogastroenterology* 2013;60:1736-1741.
- [39] Mashlool ZT, Aowda MA. Effect of cupping treatment on some biochemical variables of Thi-Qar province. *IMPACT: International Journal of Research in Applied Natural and Social Sciences* 2016;4:93-104.
- [40] Akbari A, Shariat Zadeh SMA, Ramezani M, Shariat Zadeh SM. The effect of hijama (cupping) on oxidative stress indexes & various blood factors in patients suffering from diabetes type II. *Switzerland Research Park Journal* 2013;9:102.