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Cupping in hypertension: A strength of Unani system of medicine

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Abstract

Hypertension considered as a global public health problem and in recent decades, it has shown a growing trend due to changes in lifestyle. The prevalence of hypertension increases with age to the extent that one out of every two individuals older than 60 year of suffering from high blood pressure. In the conventional medicine there is no complete cure available and has a lots of side effect too. Therefore addressing this disease from the viewpoint might provide a better management from the prospective of Unani traditional regime cupping therapy (with mechanism of action).

Keywords: Hypertension, Unani medicine, regimental therapy, cupping

1. Introduction

Hypertension is the most common public health problem of the developed as well as the developing countries. According to WHO the hypertension is estimated to cause 7.5 million deaths, about 12.8% of the total of all deaths worldwide. This accounts for 57 million disability adjusted life years [1]. In India the prevalence of hypertension ranges from 20-40% in urban adults and 12-17% among rural adults. The number of people with hypertension is projected to increase from 118million in 2000 to 214 million in 2025, with nearly equal number of men and women [2].

Hypertension is the sustained elevation of arterial blood pressure; normal values of systolic and diastolic blood pressure at rest are <120 and <80 mmHg respectively. Hence, hypertension is said to be present if blood pressure is found persistently elevated at or above 140/90 mmHg. Hypertension is classically categorized into two kinds; primary hypertension and secondary hypertension. In primary hypertension, high blood pressure is thought to be idiopathic; whereas secondary hypertension occurs due to secondary causes such as reno-vascular disease, renal failure and aldosteronism etc.

The available treatment of hypertension in modern medicine includes several classes of antihypertensive drugs such as diuretics, beta blockers, calcium channel blockers, ACE inhibitors, vasodilators etc. These agents are efficient in controlling the BP of a hypertensive individual but associated with serious side effects such as hyperglycemia, depression, lost of taste, leucopenia, depression, cramps, vomiting, drowsiness, dryness of mouth, impotence and constipation etc. Some of these drugs are toxic to kidneys and also inefficient in controlling symptoms of hypertensive individual [3].

Therefore Unani medicine which has been treating hypertension through therapies like cupping, venesection, massage, and herbal origin drugs, can be used as safe and effective approach in the management of hypertension.

2. Unani concept

The term hypertension has not been used as such in the classical Unani literature; although most of the Unani scholars were familiar with its clinical manifestations, as the detailed description of organs of circulation has been rendered by Ibn Nafees (1208-1289). The functions of heart elaborated by Aristotle have been summarily refuted by Ibn Nafees [4]. The clinical condition simulating to the hypertension has been described under the title of *Imtila*. It is a diseased condition in which the body fluids are accumulated in different parts of the body particularly in the blood vessels, and its possible English equivalent is 'congestion'.

Types: *Imtila* is of two types

1. *Imtila' bi HasbilAuyia*
2. *Imtila' bi HasbilQuwa*

Ibne Sina, Majusi and Razi have also classified it into “*Imtila’bi Hasbil Auyia* and *Imtila’bi Hasbil Quwa*” which observed clinically in hypertension.

‘Imtila’ bi Hasbil Auyia (repletion in regard to vessels) is an increased vascular volume resulting in the increased vascular pressure. The main symptoms are flushing of the body, lethargy, restlessness, prominent and dilated veins, congestion of eyes, drowsiness, yawning, heaviness of head, visual disturbances, loss of appetite, difficulty in performing mental functions, and mental stress, nausea, high volume pulse and dark cloudy urine [4, 5, 6, 7, 8]. These all symptoms are very much similar to the symptoms of hypertension which are described after many research.

Ibn Rushd says that the increase volume of intracellular fluid may result in *Imtila*; if associated with abnormal temperament, it is called *Imtila’ bi Hasbil Quwa* (repletion in regarding to vitality) [9].

3. Etio-pathogenesis

Majusi stated that *Imtila* is caused by excess intake of foods, alcohol, inactivity and consumption of less nutritious foods producing vicious humours in the body. Majusi also stated that abnormal accumulation of the morbid matters (both stagnant and active) in the blood vessel may lead to increased tension and pressure. Generally this *Imtila* is predisposed by dominance of increased volume of blood in the blood vessels. According to Ibn Sina and Majusi, excess of food intake, alcohol, rest and lack of exercise result in the accumulation of waste product in our body and causing *Imtila* [10, 11].

4. Management

In Unani the first and foremost principle of management of *Imtila* (hypertension) is to decrease the magnitude of *Imtila* by the reduction of the fluid volume of the vessels.

Imtila (hypertension) is commonly managed on the following three principles.

- *Ilajbil-Ghiza* (Dietotherapy)
- *Ilajbil-Dawa* (Pharmacotherapy)
- *Ilajbil-Tadbeer* (Regimenal therapy)

All above three therapies are very effective in the management of hypertension but here we discuss about regimenal therapy. Some common regimenal therapies for the management of *Imtila* are mentioned as under; *Fasd* (Venesection), *Ta’leeq* (Leeching), *Is’hal* (Purgation), *Tar’eeq* (Diaphoresis) *Hijamah* (Cupping) in which cupping is the important one [5, 12, 13].

4.1 Cupping Therapy

Unani system of medicine is based on four body humours viz. *Dam* (Blood), *Safra* (yellow bile), *Balgham* (Phlegm) and *Sauda* (Black bile). These elements are said to make up the human body and in health individuals the elements are in a state of equilibrium. Imbalance can be caused when the equilibrium of the humors (*Akhlat*) is disturbed quantitatively or qualitatively or both and physiological functions of the body are deranged due to abnormal temperament of affected organ or system resulting in disease like hypertension. So the emphasis is given to evacuate the deranged humors from the body (*Istifragh*) or divert them to a route from which they can be eliminated easily (*Imala*) to restore Health. Cupping therapy is also believed and experienced to treat and manage the hypertension. Many clinical trial have been done to prove the efficacy of cupping.

4.1.1 Types of Cupping

4.1.1.1 The cupping is basically of two types

1. Dry cupping/cupping without scarification/*Hijamat-bil-shurt*
2. Wet cupping/cupping with scarification/*Hijamat-bil-shurt*

In wet cupping superficial or deep scarification is applied on the surface of the body to be cupped, whereby the blood is sucked from the capillaries. In this procedure upto 20 ounces of blood could be withdrawn at a time from a local site, using 5 cups and obtaining 4 ounce per cup [32].

4.1.2 Mechanism and theories about how cupping therapy works

The mechanism of action of cupping therapy needs to be explained. Many queries arise from time to time about the exact role of cupping in managing and treating diseases and medical condition that seem resistant to current treatment modalities. Many theories exist to explain benefits of cupping therapy. Here we discussed some of them briefly to know the complete mechanism how cupping therapy works.

4.1.3 Chinese theory for cupping therapy

The concept and theory about mechanism of cupping therapy according to the Chinese theory need revision in light of medical scientific knowledge. Practitioners if cupping therapy in traditional Chinese medicine may believe that diseases are caused by stagnation or blocking the source of vital energy of life. They believe that cupping therapy works by unblocking vital energy and restoring correct balance to regain its flow [14]. However, the concept of energy source and stagnant or deficient blood seem not to be in line with the basic scientific medical concept. To discuss that from the medical and scientific point of view, it is worth saying that the source of energy in living cells come mainly from mitochondrial oxidative phosphorylation reactions in all body cells containing mitochondria, added to that, glucose oxidation (glycolysis) is a cytoplasmic source of energy in body cell [15, 16]. Energy source in cells do not seem to have any relation with cupping therapy. No scientific reports mentioned that cupping therapy can affect glycolysis or mitochondrial pathways for energy production.

4.1.4 Efficacy of cupping in hypertension

1. Wang and Xia investigated the effect of dry cupping on cerebral vascular function in patients with hypertension. Patients were randomized into two groups, one receiving dry cupping and the other drug therapy. After 2 weeks the changes in cerebral vascular function in patients with hypertension on vascular compliance and vascular filling were significantly better in the dry cupping group than in the control group. one uncontrolled observational study showed that a onetime wet cupping treatment had a positive effect of reducing acute BP elevation [17].
2. Mechanism of cupping therapy according to Hong *et al.* Hong *et al* reported that cupping therapy works via creating specific changes in local tissue structure as a result of local negative pressure in the cups used which stretches the nerve and muscle causing an increase in blood circulation and causing auto-hemolysis [18]. When investigating the mechanism proposed by Hong *et al.*, it may be accepted to mention that local negative pressure may affect tissue structure and increase blood circulation but this is not enough to explain benefits of cupping therapy in treating cellulitis, migraine, headache,

hypertension, and others.

- Mechanism of cupping therapy according to Gao *et al.* Gao *et al* suggested that putting cups on selected acupoints on the skin produces hyperaemia or haemostasis which results in a therapeutic effect [19, 20]. However, this seems not enough to explain therapeutic benefits of cupping therapy as regard effect of cupping therapy in treating RA, Cellulitis and others.
- Taibah theory for *Al hijamah* (cupping therapy) (by salah. EI Sayed) with scientific mechanism. We report here a novel simple theory to explain scientific mechanism that governs the process and therapeutic benefits of cupping. Wet Cupping therapy seems to be related in principle to the scientific principles governing excretory functions of the kidney to the extent that cupping may be regarded as an artificial kidney that performs skin capillary filtration and size dependent excretion of particles at pressure higher than filtration pressures in renal glomeruli. While excretion through kidney is limited to hydrophilic materials [21], cupping therapy can excrete the hydrophilic and hydrophobic materials as lipoprotein [22] and enhance the natural excretory role of skin.

Taibah theory states that *Al Hijamah* is wet cupping therapy of prophetic medicine which is a part of Unani system of medicine. *Al Hijamah* includes all steps 9 and consequently similar or better therapeutic benefits) of both Chinese dry cupping therapy and wet cupping therapy altogether.

Saleh's theory of wet cupping therapy is named Taibah theory. In light of Taibah theory, prophetic method of wet cupping therapy (*Al hijamah*) can be defined as a minor surgical excretory procedure that creates superficial skin scarifications to open skin barrier and create a pressure gradient and a traction force across the skin and underlying capillaries to drain interstitial fluids and enhance blood clearance and waste excretion through skin [21].

4.1.5 *Al Hijamah* for hypertension, how cupping therapy control the high blood pressure, In the light of taibah theory

Hermann M *et al* report that NO (nitric oxide) plays a major role in regulating blood pressure and that impaired NO bioactivity is an important component of hypertension. Clinical studies have shown that patient with hypertension have a blunted arterial vasodilatory response to infusion of endothelial dependent vasodilators and that inhibition of NO raises blood pressure. Impaired NO bioactivity is also implicated in arterial stiffness, a major mechanism of systolic hypertension [23].

4.1.6 *Al -hijamah* increases the production of NO

NO concentration increases in blood plasma following skin punctures in acupuncture in a time dependent manner. Blood flow in subcutaneous tissue at acupunctured site also increases and this correlates with the NO increase i.e. acupuncture increases NO level in treated regions and thereby increases regional circulation. Production of endogenous NO was reported to increase after skin injury and in wounds [24]. Based on that, skin scarification (done during *Al hijamah*) may have a similar effect I increasing NO levels.

NO acts as a neurotransmitter, immunoregulator, vasodilator, anti-proliferative, anti-neoplastic, and anti- microbial agent [25] thus we can say Cupping is very helpful in managing blood pressure.

4.1.7 *Al-hijamah* for treatment of hypertension in the light of taibah theory

Obese hypertensive patients were reported to have a higher significant value of extracellular and interstitial fluid volumes than normotensive subject. In some patients with renal hypertension, volume dependant form of hypertension may occur. Reduction of increase fluid volumes may be essential in the management of these cases [26]. In some studies, renal hypertension was reported to be caused by inhibition of NO synthetase that synthesizes NO (A vasodilator). This may cause systemic and glomerular hypertension, glomerular ischemia, glomerulosclerosis, and proteinuria [27, 28]. Free radicals e.g. superoxide anions-induced oxidative stress was reported to cause inactivation of NO synthase and a decrease of the total NO production in human renal hypertension. Oxidative stress occurs early in the course of chronic kidney diseases causing hypertension that increases as the disease progresses [29].

In light of Taibah theory, as cupping therapy can drain interstitial fluids and filter excess intravascular fluids full with metabolic noxious substance and enhances endogenous production, *Al-hijamah* may be beneficial in treating hypertension.

5. Efficacy of cupping in hypertension

- Wang and Xia investigated the effect of dry cupping on cerebral vascular function in patients with hypertension. Patients were randomized into two groups, one receiving dry cupping and the other drug therapy. After 2 weeks the changes in cerebral vascular function in patients with hypertension on vascular compliance and vascular filling were significantly better in the dry cupping group than in the control group. one uncontrolled observational study showed that a onetime wet cupping treatment had a positive effect o reducing acute BP elevation [18].
- In an another study, in which two cases of hypertension were selected for wet cupping therapy and blood pressure measure before and after the study and significant result was noted. As BP was 206/120 mmHg before study becomes 130/86 after completion of the study [30].

6. Conclusion and Recommendation

Treatment using cupping therapy keeps human body away from a long list of undesired side effects and possible drug interactions of therapeutic drugs. Searching for scientific principles of cupping therapy urged us to propose a new mechanism to explain scientific and medical bases of cupping therapy, Taibah theory. Taibah theory gives scientific principles of dry cupping as well as wet cupping.

Both modern and Unani medicine proved the beneficial value of cupping therapy in treatment of diseases that are different in etiology and pathogenesis. WHO invited to shed more light upon health benefits of *Al-hijamah* and to encourage its practise in hospitals.

Applying cupping is the best solution to prevent and treat such cases as cupping decreases the level of fat and increase the production of NO in blood to normal one, gets rid of hypertension and increases the blood flow through heart tissue after cleaning the arteries and preventing them from atherosclerosis. Researchers worldwide are invited to pay more attention to develop more research in cupping therapy practiced in Unani system of medicine to cure and relieve hypertension and other incurable diseases with dismal prognosis.

7. References

1. Raised blood pressure. <https://www.who.in>. 30 Nov, 2018.
2. Hypertension in India. <https://www.cadiresearch.org>. 30 Nov, 2018.
3. Naomi DL, Fisher, Gordon H, Williams. Hypertensive vascular disease. Harrison's principal of internal medicine. 16th edition, McGraw-Hill, 2:1436-1480.
4. Khalid M *et al*. Essential hypertension- A Co Relational Approach in Unani Medicine. International Journal of Pharmacognosy. 2016;3(6):240-245.
5. Iqbal MN. Concept of hypertension in Unani system of medicine. International Pharmaceutica Scientia. 2013;3:2.
6. Jurjani AH. Zakhira khowarezam Shahi part-1 (Urdu translation). Lucknow: Matba Munshi Naval Kishore, 1903, 24-25.
7. Roshnak G, Manouchehr G, Gholammreza A, Esmail N, Alireza N. Hypertension from the Prospective of Iranian Traditional Medicine. Iran Red Crescent Med J. 2014;16:3
8. Mojtaba H, Behnam D, Samad EJ, Golzari HH, Mohammad MZ. The Medieval Origins of the concept of Hypertension. Heart View. 2014;15(3):96-98
9. Kabiruddin M. kulliyat-e-Nafisi. New Delhi: Idara kitab al shifa, 1954, 119, 319.
10. Ibn Rushd A. Kitabulkuliyat (Urdu translation). 2nd Edition. New Delhi: CCRUM, 1987, 157-158
11. Majoosi AIB. *Kamelul-sana'at*, (Urdu translation by Ghulam hussainkantoory). Idaraketabuhshifa, New Delhi, 2010, 548-551.
12. Sina I. Al Qanoon Fit Tib. (Urdu translation by Ghulam hussain kantoory), New Delhi: Ejaz publication house, 2010, 136-137.
13. Arif M. Clinical study on primary hypertension and a comparative evaluation of qurs-e-Dawa-us-shifa with amlodipine in its management. Department of Moalajat: Aligarh Muslim University, 2008, 35-52.
14. Nisar SS. Clinical study on essential hypertension and evaluation of efficacy of Persiyaoshan and sankhaholi in its management. New Delhi: Department of Moalajat Jamia Hamdard, 2012, 58-65.
15. Tham LM, Lee HP, Lu C. Cupping: from a biomechanical perspective. J Biomech. 2006;39:2183-2193.
16. Warburg O. On the origin of cancer cells. Science. 1956;123:309-314.
17. EI Syed SM, Abou EI-Magd RM, Shishido Y, Chung SP, Sakai T *et al*. D-Amino acid oxidase gene therapy sensitizes glioma cells to the antiglycolytic effect of 3-bromopyruvate. Cancer gene ther. 2012;19(1):1-18
18. M.S. Lee *et al*, Cupping for hypertension: A Systematic Review. Clinical and experimental hypertension. 2010;32(7):424.
19. Hong SH, Wu F, Lu X, Cai Q, Guo Y. Study on mechanism of cupping therapy. Zhongguo Zhen Jiu. 2011;31:932-934.
20. Cao H, Li X, Liu J. An updated review of the efficacy of cupping therapy. PLOS One. 2012;7(2):e31793
21. Gao LW. Practical Cupping therapy (In Chinese). Beijing; Academy press, 2004.
22. Smith HS. Opioid metabolism. Mayo clin Proc. 84:613-624.
23. Rukzan LM, Al-Sabaawy DO. Effect of wet cupping on serum lipids profile levels of hyperlipidemic patients and correlation with soemetal ions. Raf J Sci. 2012;2(3):128-136.
24. URL:https://www.ncbi.nlm.nih.gov/Nitric_oxide_in_hypertension. Accessed on 5-12-18, 12:54 pm.
25. Schaffer MR, Tantry U, Van Wesep RA, Barbul A. Nitric Oxide metabolism in wound. J Surg Res. 1997;71(1):27-31.
26. Wang R, Ghahary A, Shen YJ, Scott PG, Tredget EE. Human dermal fibroblasts produce nitric oxide and express both constitutive and inducible nitric oxide synthase isofors. J Invest Dermatol. 1996;106(3):419-27
27. Dorhout Mees EJ, Geyskes GG, Vos J, Boer P. Observation of the roe of body fluid volumes and plasma renin activity in the management of hypertension. Arch Int Pharmacodynther. 1975;214:335-346.
28. Stenger S *et al*. Reactivation of latent leishmaniasis by inhibition of inducible nitric oxide synthase. J Exp Med. 1996;183(4):1501-1514.
29. Zatz R, Baylis C. Chronic nitric oxide inhibition model six years on hypertension. Hypertension. 1998;32(6):958-964.
30. Wang D, Iversen J, Wilcox CS, Strandgaard S. Endothelial dysfunction and reduced nitric oxide in resistance arteries in autosomal-dominant polycystic kidney disease. Kidney int. 2003;64(4):1381-1388
31. Hasan I. Hypertension and its management from the prospective of Unani traditional regime cupping therapy, Indiam Journal of Applied Research. 2017 Jan;7(1):719.
32. Zaidi SMA, Jameel SS, Jafri K, Khan SA, Ahmad E. ILAJ BIL Hijamah (Cupping Therapy) In Unani System of Medicine: Anecdotal Practice to Evidence Based Therapy Ilaj Bil Hijamah (Terapija Puštanjem Krvi) U Medicinskom Sustavu Unani: OD Anegdotalne Prakse Do Terapije Temeljene Na Dokazim A. Acta Med Hist Adriat. 2016;14(1):81-94.