



## **Effect of Wet cupping on Human Venous Blood factors in Golestan Province**

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### **ABSTRACT**

*Cupping is one of the oldest and the most experienced ways of traditional medicine in Iranis that despite its influence in the prevention and treatment of diseases, the effectiveness and side effects are not fully known. This study was to determine the effect of wet cupping (hijama) on human venous blood factors including the number of platelets, white blood cells, red blood cells and hemoglobin. 21 male volunteers (mean age  $7 \pm 30$  years) in spring 1393, was among those who choose to do more bloodletting and blood samples from all of them were taken before and one week after the bloodletting, then all parameters listed in the above was measured. Phlebotomy was performed in all patients in the area between the shoulder blades. The results show that the number means ofwhite blood cells, red blood cells, hemoglobin and blood platelet increases that could have a positive impact on have anemia treatment. It also causes a decrease in hematocrit blood thinner, which can be very useful for cardiac patients is important. Although an increase in platelet count, hemoglobin, red blood cells and white blood cells and a decrease in hematocrit level was observed after cupping; the changes were not statistically significant.*

*Keywords: Wet Cupping, RBCs, Venous Blood*

Received 11.02.2016

Revised 30.03.2016

Accepted 15.04.2016

### **INTRODUCTION**

Traditional Iranian medicine is a knowledge that goes back to more than 8,000 years BC, [1]. Hijama has always had a special place in the popular culture in Iran. Avicenna has prescribed cupping and hijama for nearly all diseases in his book "Ghanoon", Zakaria Razi and Jurjani also used cupping to treat cold and allergy [1,2]. In Europe as well, famous physician such as Paracelsus (1541-1493) and Ambroise Pare (1590-1509), used hijama as an efficient way of therapy [2]. Hijama is a method for local removal of unhealthy blood which a cup is placed on the skin surface and blood is sucked by pressure. Hijama has two types: (Wet cupping) which is associated with bloodletting and (Dry cupping) without leaving blood and is the only cup. The suction can be created with a flame or vacuum pump [2]. Due to the limited number of studies and scientific information on the effects of hijama on human blood factors, this study was carried out whose results could be a prelude for future studies in this field.

### **MATERIALS & METHODS**

In this study, 21 healthy male volunteers (mean age  $30 \pm 7$  years) were selected among patients who were referred to letting research institute of imam reza (peace be upon him) in Gorgan, in the spring of 1393. For bloodletting the person must sit on the bed cross-legged position, after disinfect the area with alcohol, put a bloodletting disposable glass (specified for bloodletting) on the bloodletting site and discharge the air inside the suction cup to begin cupping. This creates a vacuum in the glass and ambient air pressure causes the patient's skin being made into glasses and cups in their place was cemented. Cupping action continued for 3 to 5 minutes on the skin surface. This action in addition to creating congestion and inflammation in position, causes accumulation of small capillary blood in the bloodletting position. Then bloodletting glass was separated from the position and with a sterile disposable surgical blade some scratches were placed obliquely on the skin surface by depth of half to one millimeter bloodletting position (figure 1). Then bloodletting mug was put in position again and cupping blood was sucked in the glass. Drain and cupping was performed 3 to 5 times, each time for 3 to 5 minutes. Therefore bloodletting operation lasted on average between 15 to 20 minutes. In total process of cupping, a maximum of 50 to 75 ml of blood were removed from the body. Then bloodletting position was

scrubbed, and dressed by sterile gauze & honey. In the whole process, bloodletting was done only by one therapist to minimize possibility of human error. Seven days later, blood samples were taken from volunteers & all indices were measured again. All data were collected and the effect of intervention was evaluated by SPSS18 software (paired t test). In addition, the significance (P) was considered <0.05.



**Figure 1- cupping and dressing procedure**

**Table 1-Comparison of average blood factor before and after bloodletting (n = 21)**

Factors		MEAN±SEM	p-value
WBC (μl)	Before	7014.28 ± 1842.63	0.79
	After	7095.23 ± 1303.66	
RBC (μl)	Before	5.08 ± 0.55	0.74
	After	5.10 ± 0.55	
HB (g/dl)	Before	13.89 ± 1.22	0.92
	After	13.90 ± 1.22	
HCT (%)	Before	41.27 ± 2.85	0.85
	After	41.20 ± 2.38	
PLT (μl)	Before	227714.28 ± 42430.11	0.75
	After	229238.09 ± 42194.67	

**DISCUSSION**

Despite great advances in medical science and dissemination of modern medicine, many people around the world seem to be interested in other therapies such as herbal therapy, homeopathy, acupuncture, energy therapy, cupping and so on. Prevalence use of these methods, (known as complementary or alternative medicine) is increasing on all around the world. Although the role of current medicine in the treatment and diagnosis of many diseases is undeniable, but modern medicine is disabled in many of chronic disease control, reduction and prevention of them. Scientific researchers have demonstrated the effectiveness and safety of some form of complementary medicine in the treatment of diseases and now use of them is mentioned as integrative medicine methods. Other methods as well, although their mechanisms are unknown and a lack of evidence to prove their effectiveness in comparison with modern medicine, are used by many patients. As was mentioned in the introduction, bloodletting is one of traditional medicine treatments from past to the present in various forms which is used in most countries. It is seen in the ancient documents that people of different nations used the bloodletting for the treatment and prevention of diseases. Some people believe that bloodletting is an ancient method which is no longer need to do due to modern venipuncture sampling. One of the objections in the some quarters is due to this thought that cupping is mostly like venous blood sampling. But according to the results of several studies that have been carried out on the blood of venous blood sampling and bloodletting it can be said that they are different. This difference could be due to the position of bloodletting or the method of bloodletting. In the traditional medicine books for bloodletting different positions for each position specific therapeutic effects have been mentioned and the difference in the position of blood sampling in venous blood and bloodletting blood is an important factor in this variation. Another important difference between blood sampling and blood samples of bloodletting with each other is related to Methods of blood sampling. Cupping and creating congestion and inflammation is an integral part of bloodletting. Important implications for cupping itself have been mentioned. In addition to immune cells recall, cupping causing inflammation in the position helps to increase blood flow to the areas that need treatment. According to mentioned evidences it could be said that bloodletting is not only a simple blood sampling method and based on documents available in the traditional medicine and Islamic medicine

books is a treatment method. The combination of biochemical and immunological factors in bloodletting blood is in a way that even if the blood collected (be due to its high concentrations of waste material) is not available to those who need it. This study showed that performing one episode of cupping causes decrease in hematocrit and increase in RBC, WBC, Hb and PLT, however was not significant. The average obtained from results showed increase in red blood cells, white blood cells, hemoglobin and platelet count, but the amount of blood hematocrit, which represents the blood concentration decreased. According to the results, despite the differences in the factors measured, the changes are limited and have no statistically significant variations, but an increase in an average factor of red blood cells, white blood cells, hemoglobin and platelets and decrease in average hematocrit cannot be ignored. These changes, in turn, could have very significant impact in the treatment and control of diseases such as heart disease chronic anemia's. By comparing the results with other similar studies, differences in the rate of change and the resulting effects on blood factors can be achieved due to the number and duration (two weeks and 28 days) at other times of the cup's studies specifically increased by repeated phlebotomy and creates more changes in hematological parameters.

Also, by comparing the amount and variations of factors before and after of bloodletting against these factors in other studies, these differences could be due in different parts of the body and steps of cupping. As it has been said in traditional medicine books about different effects on different parts of the body cupping [3, 4], In addition, the bloodletting can increase blood flow to the desired place by calling up immune cells and causing inflammation at the site of cupping, in need of medication and treatment, such as local pain caused by cancer and osteoarthritis. The study was performed for the first time by searching in valid databases and the effect of letting the hematologic indices, after a week of "the man" was not studied to be discussed. Research results of Vaez Mahdavi *et al.* [2] on the differences of venous Blood and the blood of bloodletting factors showed that RBC, Hb, viscosity and hematocrit levels are significantly higher and platelet levels are significantly lower in the blood of in the blood bloodletting Compared to the venipuncture blood. The results of Aeini *et al* [1] on the mice showed a significant increase in red blood cell levels and (HCT) in twice-bloodletting group. As well as hemoglobin level was also higher in this group, although statistical analysis did not show significant differences. This difference may be due to differences in the method of bloodletting in mice or difference in animal models and humans. Recently, many studies has been conducted on the effect of cupping in the treatment of some diseases, including herpes zoster, and the results of these studies suggest that the bloodletting has better effect in the treatment of herpes zoster compared to drugs used in this studies. Results of studies on the effect of cupping in the treatment of facial paralysis (Bell's palsy) also suggest that combination therapy with acupuncture and cupping or neurotrophic drugs, compared with drug therapy alone, has more effectiveness. Also study reviews on the effect of cupping in the treatment of acne compared to medications such as tetracycline and ketoconazole, suggests that cupping has much better effects in the treatment of this disease. Several studies have also investigated the effect of cupping on spondylosis, migraine, asthma, arthritis, back pain etc.

## CONCLUSION

The results of these studies also show positive effect of Hijama on the treatment of these diseases. Cupping mechanism and therapeutic effects of it are not known and still require extensive research, so we cannot comment on the possible advantages and disadvantages.

## REFERENCES

1. Aeini. Z., Afsahi, A, Rezvan, H. (2013). Effect ofHijama (wet Cupping) on Hematological factors on soory mouse(BALB/C). (InPersion)
2. Vaez Mahdavi, M. R., Ghazanfari, T., Aghajani, M., Danyali, F and Naseri, M (2013).Evaluation of the Effects of Traditional Cupping on the Biochemical, Hematological and Immunological Factors of Human Venous Blood.Compendium of Essays on Alternative Therapy.
3. Jorjani, S (Ed.). (1975). Zakhireh Khrazmshahi, translated to Persian by: SirjaniSaidi. Tehran: Iranian cultural institute.
4. Ibn-e-Sina (Ed.). (1997). Law in medicine (Ghanondarteb) translated by Sharafkandi (Vol. 1) Tehran: Sorosh Publisher co.

## CITATION OF THIS ARTICLE

S K Jahromi, G Jelodar, A Mohammad Mallahi. Effect of wet cupping on human venous blood factors in Golestan Province. Bull. Env. Pharmacol. Life Sci., Vol 5 [6] May 2016:25-27