

# Comparative Study of the Hematological Parameters and Biochemical Factors for Cupping and Venous Blood

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## Abstract

*The aim concerning this delivery note is according to consider biochemical and hematological elements within the blood present all through cupping then in the gore of the venous. About forty samples over durability guys participated among this evaluative discipline aged within (25-50) years. The hematological parameter, had been evaluated with the aid of hematology analyzer, biochemical had been evaluated through Merck's value kits then Sedimentation dosage was once adequate by using waster green approach. Results study showed a vast difference into venous blood yet cupping gore of much of the hematological then biochemical parameters. The cupping blood is special, each between aspects then immunological reaction, primarily based of the results concerning the contrast of venous gore then cupping blood.*

**Keywords:** Cupping, Hematological parameters, biochemical factors, Total blood count.

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## Introduction

In 2002 AD, The World Health Organization (WHO) longevity described standard remedy as: "Traditional medicinal drug is a picturesque term old both in imitation of refer in accordance with TM systems such as common Chink medicine, Arabic-Unani medicinal drug then Indian Ayurveda. WHO has been thinking about common medicinal drug (TM) durability development seeing that durability longevity 30 years in the past in conformity with enforce the announcement "Health because of entire by the yr 2000 A.D. The decision was based totally regarding pair grounds: firstly, poverty over get entry to in accordance with major health seriousness because a giant wide variety of human beings (up after 80% of partial countries) and secondly, dissatisfaction including the consequences concerning contemporary remedy therapies, specially with think according to persistent illnesses and the aspect outcomes concerning drugs(WHO, 2002). Traditional remedy therapies correspond of medicine cures where it consist of the usage about natural medicines, beast ingredients and/or minerals then non-medication remedies longevity such as much manual therapies, acupuncture yet spiritual therapies(Lozoya, 1994; WHO, 2002). A broad length of ailments are usually chronic among the prevention, analysis yet treatment regarding common then complementary / choice medicine. There are a couple of factors up to expectation bear led in imitation of the global extensive and growing reputation concerning conventional and complementary / alternative medicine, specifically into the past 20 years. Traditional clinical statistics perform stand transmitted verbally from generation in imitation of generation, within half instances thru related treatment-specific families, yet such execute remain taught of officially identified universities. His lookup is occasionally entirely geographically limited and be able additionally lie determined within a variety of parts concerning the world. In almost cases, however, a scientific system is referred in conformity with as "traditional"(Bodeker & Kronenberg, 2002).

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## **Cupping Therapy**

Cupping remedy is a common frequent approach that is used through sufferers according to treat a variety of disorders within the Middle East longevity then China. This entails putting cups of the skin regarding a ethnic at assured times. In the cups, a dealer produces suction as pushes towards the pores and skin regarding a human. For much purposes, we be brought it, as pain, inflammation, entertainment blood flow, and well-being, or as a kind permanency over extreme tissue massage.

Cupping originated outdoors of humoral medication among the Middle East then Europe, a fitness rule ancient by historical Greeks to fix stability via the four "humors" within the body: phlegm, blood, fuscous bile then curcuma domestica bile bile durability (Sweet, 1999). Cupping persevered after continue to be a constant into usual clinical remedy all thru Europe. Such distinguished docs as like Galen (131-200AD), Paracelsus (1493-1541) then Ambroise Pare (1509-90) studied it. Many practitioners, together with barber surgeons yet bathtub residence attendants, bear done cupping (Chirali, 1999).

### **Type of cupping**

#### **1-Dry cupping**

The approach over using a vacuum over durability more than a few parts about the physique after banish the blood without incisions between as place (small, mild cuts the use of a razor). Dry cupping is comparable in imitation of glacial massage cupping, but olive oil is added to the pores and skin (before the cups are applied) in conformity with perform the cups to move easily. Blood is unable in accordance with reach assured components regarding the body fit in conformity with 70 percentage regarding diseases, endeavor yet ailments. Dry cupping allows it places according to attain the blood (Nikhat, 2010).

#### **2- Wet cupping**

This is the work of using a vacuum at a variety of factors in the physique however including incisions in accordance with remove 'detrimental' gore simply below the skin's surface) (Chirali, 1999; Michalsen, et al., 2009) (Wet cupping is counseled solely by a cupping therapist).

### **Methods**

- The lesson was conducted about 40 healthy, randomly selected volunteer guys majority rang (25 – 50) years. All samples have been near within 10 yet 4 o'clock into November permanency 2019. And this volunteers had no records about chronic disease. 15 ml regarding venous gore sample was once accrued from each shareholder at the beginning about the education before cupping.
- 10 ml of venous blood via anticoagulant tubes for to test CBC, sedimentation and differential WBC count.
- 5 ml of venous blood through without anticoagulant tubes for biochemistry parameters

The cupping technique was performed as follows:

Some glass cups are crazed the use of a potation soaked cotton ball, let, afterward positioned inside the cup. The substance inward the insincerity had burned according to remove entire the oxygen then create a vacuum. The death cup was once became upside-down according to enable the bargainer after place the hypocrisy upstairs a unique area. The vacuum manufactured by using the non-existence on oxygen addicted the insincerity according to the pores and skin yet stretched such up interior the skin.

### **Hematological parameters**

Hematological parameters have been analyzed the use of hematology analyzer stability automated Humacount plus. Tested hematological parameters include RBC, WBC, hemoglobin, MCV, MCH, MCHC, platelets and slip regarding the blood, among gore samples collected beside veins through norm protocol, or within blood samples near by cupping technique.

### Differential Staining

Differential Staining was conducted using Wright's staining to test monocytes, lymphocytes, neutrophils and eosinophils.

### Sedimentation rate

Westergreen test was used to calculate sedimentation volume.

### Biochemical testing

Serum used to be directly separated at 3500 rpm because 15 minutes through centrifuging gore samples; and assessments include permanency toughness permanency LDL, Cholesterol, durability HDL, permanency TG, Uric Acid longevity then Iron were evaluated through (Selectra Semi-Automatic Chemistry Analyzer stability Merck, Germany) the usage of Merck's grade kits.

### Statistical analysis

Using SPSS software program statistical analysis was once observed Values of hematological, biochemical parameters and sedimentation stages among each volunteer's cupping yet venous gore samples have been analyzed using parametric T-Test analysis, then non-parametric Wilcoxon checking out was aged in accordance with consider or diff variables. Results had been prepared so a paltry virtue over  $\pm$  S.D yet  $P \leq 0.05$ .

### Result

Table 1 reveals the comparison of monocytes, neutrophils and eosinophils, lymphocyte count between samples obtained of cupping with venous blood samples.

Cupping sample highly significant decline in neutrophils and monocytes ( $p=0.002$ ) and ( $p<0.003$ ) in lymphocytes, also significant increase eosinophils ( $p=0.03$ ), as compared to venous blood samples, ESR ( $p=0.013$ ) Blood sample from cupping showed insignificant increase in venous blood sample camper with cupping sample.

in table 2, sample of cupping blood showed highly significant increase as compared to venous blood samples ( $p<0.001$ ) in HDL, LDL, cholesterol and Triglyceride levels .

Table (1) Mean $\pm$ SD for blood sample hematology (venous blood and cupping)

Hematological Factors	Venous blood Mean $\pm$ SD	Blood Cupping Mean $\pm$ SD	P value
Hb (g/dl)	15.890 $\pm$ 1.3119	14.912 $\pm$ 1.2193	P=0.4
Total WBC	8430.00 $\pm$ 1597.2924	6801.000 $\pm$ 2155.1099	P=0.23
Neutrophils (%)	59.9%	44.29%	P=0.002
Eosinophils (%)	1.3%	0.7%	P=0.03
Lymphocytes (%)	38.4%	32.6%	P=0.003
Monocytes (%)	1.8 %	0.98 %	P=0.002
ESR (mm)	6.95 $\pm$ 3.16	4.87 $\pm$ 2.7	P=0.013

Table (2) biochemistry parameters blood sample (venous blood and cupping)

<b>Factors</b>	<b>Venous blood Mean ± SD</b>	<b>Blood Cupping Mean ± SD</b>	<b>P value</b>
<i>Cholesterol (mg/dl)</i>	153.31 ± 31.83	175.32 ± 32.59	P<0.001
<i>Triglyceride (mg/dl)</i>	138.34 ± 87.44	168.38± 91.33	P<0.001
<i>LDL (mg/dl)</i>	87.45± 21.42	95.41 ± 23.47	P<0.001
<i>HDL (mg/dl)</i>	43.18± 9.87	50.28± 10.18	P<0.001

## Discussion

The bosom stability accountable produces close of the body's cholesterol, while the rest comes out of our foods. The liver control blood cholesterol degrees and perform keep back ldl cholesterol agreement the body needs it. LDL cholesterol is considered "poor" ldl cholesterol because so is an improved hazard over atherosclerosis toughness associated including high attention over LDL cholesterol. LDL ldl cholesterol longevity deposits about the partitions of the artery, causing ldl cholesterol plaque after form a strong, frequent material. Over time, the preparation of cholesterol reasons the artery partitions in accordance with concentrate and the arteries in imitation of narrow. Hdl cholesterol is considered healthful ldl cholesterol due to the fact avoided atherosclerosis, by disposing of yet disposing concerning cholesterol from the vein walls through the liver. High LDL cholesterol tiers then mean HDL cholesterol levels (high LDL / HDL ratios) are chance elements because of atherosclerosis, while paltry LDL cholesterol degrees yet high HDL ldl cholesterol tiers (low LDL / HDL ratios) are beneficial(Hall. & Edward, 2011).

Bloodletting was once an advocated way to limit degrees regarding serum lipoprotein, the lesson showed greater blood tiers on Ldl, Hdl, TG then ldl cholesterol within cupping longevity than venous blood. It may consequently lie proposed so cupping performs an essential function within reduce the hazard factors concerning coronary vessel disorder durability through in addition deportation about lipids. It is well recognized so much bloodletting is associated including a reduction within cardiovascular activities (especially when prolonged then repeated) (Meyers, Jensen, & Menitove, 2002). Ultimately suggesting as moist cupping may additionally remain a trustworthy method according to reduce permanency Low Density Lipoprotein (LDL) into guys or consequently bear a defensive impact concerning coronary vein ailment (Niasari, et al., 2007).

In our research, the total of uric acid into the cupping concerning blood samples was higher than the level over venous gore so have been Serum iron findings, longevity moist cupping longevity has been endorsed in accordance with stay more nice among excreting superfluous factors in contrast in accordance with venous blood collection, (Brand, McGee, Kannel, Stokes, & Castelli, 1985; Iblher & Stark, 2007; Khosla, et al., 2005; Miller, Grover, Nayini, & Aust, 1993). To minimize the gamble about courage ailment brought on by means of excessive metal among the body so metal contributes in accordance with cardiovascular yet coronary guts disease and metal loss choice assist protect out of stability morale attacks by means of cupping . (Dastjerdi, 1996; Prabhu, Prabhu, & Prabhu, 2009).

The sedimentation quantity about cupping permanency used to be significantly lower than so concerning venous ESR, it seems in imitation of stay constant with the speculation to that amount distinct elements influence ESR. The reduction of ESR can lie regarded namely a end result over the excessive dimension concerning gore samples into as the quantity on RBCs is plenty higher than the quantity stability within toughness samples regarding venous blood and amount proteins of the cupping blood. (Ismailov, et al., 2005).

The range about WBC be counted into the cupping gore was 1\10 among Samples over venous blood. Permanency (Sheykhu, 2008). Hb concentration yet RBCs count were nicely stability high durability these in durability Samples regarding venous gore in cupping samples yet that shows to that amount cupping gore is hence thick. The morphology concerning these RBCs varies out of venous RBCs, cupping plays an essential function in the excretion on historic RBCs (Sheykhu, 2008). Our findings may stand namely confirmation: HCT (Hematocrit) level then RBCs count longevity have been additionally properly upstairs venous gore samples among the cupping permanency gore samples. It appears viable up to expectation cupping may control coagulation yet anti-coagulation procedures in the hematological rule (e.g., decrease the degree on hematological elements such as fibrinogen). Platelets are also atop within gore cupping compared to venous blood; sucking pressure seems in conformity with bear brought on extra platelet leakage, it platelet excretion increases blood clotting time (Ahmadi, et al., 2008).

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