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Management of High Blood Cholesterol Levels Through Cupping Therapy In A Clinically Healthy Young Men

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ABSTRACT

High blood pressure is a major cause of various diseases such as stroke and high cholesterol. High cholesterol and cause a variety of deadly diseases. The aim of this study was to conclude if a reduction in serum lipoproteins, especially LDL cholesterol, is a preventive approach against atherosclerosis. Phlebotomy has been a recommended method to reduce serum lipoprotein levels. As cholesterol affects the blood flow it can also impact cardiovascular fitness and sufferers may find that they get out of breath more easily or just generally feel less fit and healthy or more tired. The present study was conducted to investigate the effects of wet cupping on serum lipoprotein concentrations. In this case it is observed that cupping therapy may be an effective method of reducing LDL cholesterol in men and consequently may have a preventive effect against atherosclerosis.

Keywords: Cupping therapy, High blood cholesterol

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INTRODUCTION

Cholesterol is a waxy, fat-like substance that is found in all cells of the body. Hyperlipidemia refers to increased levels of lipids (fats) in the blood, including cholesterol and triglycerides. Although hyperlipidemia does not cause symptoms, it can significantly increase risk of developing cardiovascular disease, including disease of blood vessels supplying the heart (coronary artery disease), brain (cerebrovascular disease), and limbs (peripheral vascular disease). These conditions can in turn lead to chest pain, heart attacks, strokes, and other problems. Because of these risks, treatment is often recommended for people with hyperlipidemia^{1,2}.

When cholesterol levels are in the normal range, in a healthy body, the blood flows freely through the veins and arteries. When the cholesterol levels are high, it starts forming clots (plaques) in the blood vessels causing hypertension (high BP), angina (chest pain), heart attacks, strokes and peripheral vascular diseases. As cholesterol is a fat that is insoluble in blood, it needs something to carry it or transport it in our body. LDL, HDL, VLDL are small molecules called lipoproteins³.

Blood is watery and cholesterol is fatty. Just like oil and water, the two do not mix. So, in order to travel in the bloodstream, cholesterol is carried in small packages called lipoproteins (lip-o-PRO-teens). The small packages are made of fat (lipid) on the inside and proteins on the outside. Two kinds of lipoproteins carry cholesterol throughout the body. It is important to have healthy levels of both:

LDL (Low Density Lipoprotein)

Cholesterol is sometimes called "bad" cholesterol. High LDL cholesterol leads to a buildup of cholesterol in arteries. The higher the LDL level in blood, the greater chance to have for getting heart disease⁴.

HDL (High Density Lipoprotein)

Cholesterol is sometimes called "good" cholesterol. HDL carries cholesterol from other parts of body back to liver. The liver removes the cholesterol from body. The higher HDL cholesterol level, the lower chance of getting heart disease.

Lipid Profile

The lipid profile is a group of tests that are often ordered together to determine risk of coronary heart disease. The tests that make up a lipid profile are tests that have been shown to be good indicators of whether someone is likely to have a heart attack or stroke caused by blockage of

blood vessels i.e hardening of the arteries⁴.

MATERIALS AND METHOD

The lipid profile is used to guide physicians in deciding how a person at risk should be treated. The results of the lipid profile are considered along with other known risk factors of heart disease to develop a plan of treatment and follow-up.

High Blood Cholesterol

Too much cholesterol (ko LES ter ol) in the blood, or high blood cholesterol, can be serious. People with high blood cholesterol have a greater chance of getting heart disease. High blood cholesterol itself does not cause symptoms; so many people are unaware that their cholesterol level is too high⁴.

CAUSES OF HIGH BLOOD CHOLESTEROL⁵

Factors those Can be Control

Diet

Cholesterol is found in foods that come from animal sources, such as egg yolks, meat, and cheese. Some foods have fats that raise cholesterol level. Saturated fat raises low-density lipoprotein (LDL) cholesterol level more than anything else in diet. Saturated fat is found in some meats, dairy products, chocolate, baked goods, and deep-fried and processed foods.

Trans fatty acids raise LDL cholesterol and lower high-density lipoprotein (HDL) cholesterol. Trans fats are made when hydrogen is added to vegetable oil to harden it. Trans fats are found in some fried and processed foods. Limiting foods with cholesterol, saturated fat, and trans fats can help to control cholesterol levels.

Physical Activity and Weight

Lack of physical activity can lead to weight gain. Being overweight tends to raise LDL level, lower HDL level, and increases total cholesterol level. (Total cholesterol is a measure of the total amount of cholesterol in the blood, including LDL and HDL.) Routine physical activity can help to lose weight and lower LDL cholesterol. Being physically active also can help to raise HDL cholesterol level.

Factors those Can't Control

Heredity

High blood cholesterol can run in families. An inherited condition called familial hypercholesterolemia external link icon causes very high LDL cholesterol. ("Inherited" means the condition is passed from parents to children through genes.) This condition begins at birth,

and it may cause a heart attack at an early age⁴.

Age and Sex

Starting at puberty, men often have lower levels of HDL cholesterol than women. As women and men age, their LDL cholesterol levels often rise. Before age 55, women usually have lower LDL cholesterol levels than men. However, after age 55, women can have higher LDL levels than men^{4,5}.

Signs And Symptoms of High Blood Cholesterol

High blood cholesterol usually has no signs or symptoms. Thus, many people don't know that their cholesterol levels are too high³.

Diagnosis of High Blood Cholesterol⁴

High blood cholesterol is diagnosed by checking levels of cholesterol in blood. It is best to have a blood test called a lipid profile to measure cholesterol levels. Most people will need to "fast" (not eat or drink anything) for 9 to 12 hours before taking the test.

Table 1: Diagnostic value for lipid profile

Total Cholesterol Level	Total Cholesterol Category
Less than 200 mg/dL	Desirable
200–239 mg/dL	Borderline high
240 mg/dL and higher	High
LDL Cholesterol Level	LDL Cholesterol Category
Less than 100 mg/dL	Optimal
100–129 mg/dL	Near optimal/above optimal
130–159 mg/dL	Borderline high
160–189 mg/dL	High
190 mg/dL and higher	Very high
HDL Cholesterol Level	HDL Cholesterol Category
Less than 40 mg/dL	A major risk factor for heart disease
40–59 mg/dL	The higher, the better
60 mg/dL and higher	Considered protective against heart disease

Dangers of High Cholesterol Levels

High cholesterol levels can cause:

Atherosclerosis: narrowing of the arteries⁶.

Higher coronary heart disease risk: an abnormality of the arteries that supply blood and oxygen to the heart.

Heart attack: occurs when the supply of blood and oxygen to an area of heart muscle is blocked, usually by a clot in a coronary artery. This may causes heart muscle to die⁷.

Angina: chest pain or discomfort that occurs when your heart muscle does not get enough blood.

Stroke and mini stroke: occurs when a blood clot blocks an artery or vein, interrupting the flow to an area of the brain. Can also occur when a blood vessel breaks. Brain cells begin to die^{8,9}.

Factors may be responsible to raise triglyceride level include:

- Overweight and obesity
- Lack of physical activity
- Cigarette smoking
- Excessive alcohol use
- A very high carbohydrate diet
- Certain diseases and medicines
- Some genetic disorders

RESULTS AND DISCUSSION

Cupping therapy is a very effective but under-utilized healing technique in Unani system of medicine. There are various different techniques of cupping, involving different levels of suction, heat, and duration of therapy. Stationary cups are typically placed on the patient in an area of local stagnation with a medium level of suction for 10-15 minutes. Timing and level of suction is to be adjusted depending on the type of tissue or structure which is being treated. Cupping therapy stimulates the nerves, muscles, blood vessels and subcutaneous glands and causes a series of nerve and endocrine system responses so as to improve systemic blood circulation and can eliminate blood stasis and bad cholesterol, increase permeability of blood vessels, promote blood circulations so as to improve blood supply to the kidneys and help much alleviate renal ischemia and hypoxia states.

During wet cupping, a mild suction is created using a cup that is left in place for about three to five minutes. Then removes the cup and uses a small scalpel to make superficial skin incisions. After the procedure, the site may be covered with an antibiotic ointment/betadine lotion bandage to prevent infection. The skin's appearance generally returns to normal within 6-7 days.



Figure 1: Patient on 1st visit



Figure 2: Patient on 2nd visit

CASE PROFILE

Mr Rameez age 25 yrs, MESCO LAB Sr No. 12, lipid profile report on dated 16/11/2013. Total cholesterol 251 mg/dl, Triglycerides 540 mg/dl, VLDL 108 mg/dl, Total cholesterol /HDL ratio 5.229.

Test Name	Value	Unit	Normal Value
LIPID PROFILE			
TOTAL CHOLESTEROL	251.00	mg/dl	130 - 200
TRIGLYCERIDES	540.00	mg/dl	60 - 200
H D L CHOLESTEROL	48	mg/dl	30 - 70
V L D L	108	mg/dl	5.0 - 40.0
L D L CHOLESTEROL	95	mg/dl	85 - 130
TOTAL CHOLESTEROL/HDL RATIO	5.229		3.0 - 5.0
CHOLESTEROL/LDL	2.642		1.5 - 3.5
LIPID PROF INTERPRET			

Figure 3: Patient lipid profile report before therapy

Test Name	Value	Unit	Normal Value
LIPID PROFILE			
TOTAL CHOLESTEROL	216.00	mg/dl	130 - 200
TRIGLYCERIDES	209.00	mg/dl	60 - 200
H D L CHOLESTEROL	52	mg/dl	30 - 70
V L D L	41.8	mg/dl	5.0 - 40.0
L D L CHOLESTEROL	122.2	mg/dl	85 - 130
TOTAL CHOLESTEROL/HDL RATIO	4.154		3.0 - 5.0
CHOLESTEROL/LDL	1.768		1.5 - 3.5
LIPID PROF INTERPRET			
HAEMATOLOGY			
HAEMOGLOBIN (Hb)	15.8	gm/dl	13.0 - 18.0

Figure 4: patient lipid profile report after therapy

This patient was on cupping therapy only, one time in 15 days, so far total 4 times therapy was done accordingly and then send for lipid profile check up in the above same LAB MESCO on dated 08/01/2014, Sr No. 20, and reports is surprising as of follows:

Total cholesterol 216 mg/dl, Triglycerides 209 mg/dl, HDL 52 mg/dl, VLDL 41.8 mg/dl, LDL 122.2 mg/dl, total cholesterol /HDL ratio 4.154 (Normal range is 3.0-5.0), and very interesting Hb level 15.8 mg/dl (normal range is 13.0-18.0).

Informed Consent

Patients were properly informed (before treatment) about the potential for cup marks, temporary discoloration of the skin that may range from pale brown to darker red/purple depending on level of stagnation and whether the condition is of a deficient or excess, hot or cold nature. Cup marks are evidence of the removal of toxins trapped in the muscle and skin layers. Patients were also be informed that the areas of cupping should be protected from cold, wind, or water for the rest of the day after treatment.

Contraindications

Current general opinion is that cupping should not be used to treat the low back or abdomen of pregnant women, due to the possibility that through its actions on regulating the autonomic nervous system, cupping may stimulate uterine contractions, which may potentially negatively influence a high-risk pregnancy.

Preventive Measures Can Be Adopted To Reduce Cholesrerol Level^{10,11}

Lifestyle

- Most people, especially those whose only risk factor has been lifestyle, can generally get their cholesterol and triglyceride levels back to normal by
- Doing plenty of exercise.
- Eating plenty of fruits, vegetables, whole grains, oats, and good quality fats.
- Avoiding foods with saturated fats.
- Getting plenty of sleep (8 hours each night).Bringing your bodyweight back to normal.
- Avoiding alcohol.
- Stopping smoking.

CONCLUSION

This study showed a significant change in the cholesterol profile after 4 repeated treatments in a rate of once per week. However, despite the apparent success of this study, will that change in lipid profile be maintained is not clear. The data in this case is not applicable to the larger

population and control study is necessary for better comparison. Therefore, more detail scientific research studies are necessary to suggest cupping therapy is effective for treating high lipid profile in order to provide the additional effect with control treatment.

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