
Effects and Mechanisms of Action of Cupping Therapy (Al-Hijama): A View

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ABSTRACT

The word 'Hijama' signifies 'drawing out' in Arabic. It is at present being recognized as an alternative medication or alternative method of treating various sicknesses and real issues, which additionally includes perhaps the most deadliest and serious afflictions. In East Asia, cupping is a well known alternative solution for an assortment of sicknesses. It is chiefly endorsed as an administration for ongoing agony, but on the other hand is assigned for an entire variety of respiratory, gastroenterological, and gynecological problems. Cupping is completely secure, easy and modest method used to facilitate the agony and inconvenience emerging from issues of the interior organs, muscle fits, joint torments, and in numerous different conditions.

Current clinical science additionally witnesses the different advantages of Hijama and even elevates its training in specific illnesses. Hijama is an old phlebotomy technique that has been utilized in numerous nations to fix certain sicknesses or real problems. In any case the mechanism of action of (CT) isn't completely perceived. This paper expected to distinguish potential mechanisms of action of (CT) from present day medication viewpoint and offer potential clarifications of its belongings.

Keywords: *Hijama, Mechanism of action, Cupping Therapy.*

INTRODUCTION

Cupping therapy is an old strategy [1], Most of antiquated human advancements working on cupping therapy. Antiquated Egyptians, Ancient Chinese, Greeks and Arabs are well known professionals of this training. There are numerous kinds of cupping therapy; nonetheless, dry and wet cupping are the two principle types [2].

Dry cupping maneuvers the skin into the cup without scarifications, while in wet cupping the skin is slashed so that blood is brought into the cup [3] Although cupping has been a treatment for quite a long time, and had been utilized by different culture

and social orders, its mechanism of action isn't surely known [4]. As of late, premium in cupping has reappeared and thusly, a few examinations have started to research the mechanisms supporting cupping therapy [5]. For the standard specialists prepared in western clinical sciences, the attention is to a great extent on the biomedical reasons for illness, while customary medication experts adopt an all encompassing strategy [6].

Eminently, cupping therapy perhaps creates various impacts through a plenty of mechanisms [7]. Examination researchers will in general clarify a specific wonder or

impact of a medication or gadget or cupping therapy by depicting its fundamental mechanism (s). By and by, portrayal of a mechanism is never finished on the grounds that subtleties of related cycles are not completely recognized [8].

METHODOLOGY

Author has looked through the antiquated and ongoing Unani literature, conventional books and postulation. Logical data sets like Google search, Google researcher and Web of Science were utilized and the watchwords utilized for the writing search were cupping therapy, alhijamah, wet cupping. Creator gathered the information by above techniques and summed up the current logical data about the cupping method.

This survey zeroed in on speculations and theories that clarify mechanisms of cupping therapy from an advanced medication point of view. Speculations identified with conventional frameworks of medication, for example, Traditional Chinese Medicine, Unani Medicine or other customary recuperating rehearses were incorporated.

DISCUSSION

Numerous hypotheses have been proposed to clarify various impacts of cupping therapy and its mechanisms of action [9]. A few scientists proposed organic and mechanical cycles related with the cupping meeting.

For example, decrease of agony may result from changes in biomechanical properties of the skin as clarified by the "Torment Gate Theory" (PGT),[10], "Diffuse Noxious Inhibitory Controls" (DNICs)

[11], and "Reflex Zone Theory" (ZRT) [12]. Muscle unwinding, explicit changes in nearby tissue designs and expansion in blood flow could be clarified by the "Nitric Oxide Theory" [13].

The immunomodulatory impacts of cupping therapy could be credited to the "Activation of Immune System Theory" (AIST). Delivering of poisons and evacuation of squanders and substantial metals may be credited to the "Blood Detoxification Theory" (BDT) [14]. These speculations may have been interfacing agreeably to create the gainful impacts of cupping in treating patients with different sicknesses and advancing prosperity in sound individuals.

Cupping therapy effects with mechanism of action

Assessing the writing on cupping and its mechanism of action has uncovered lacking data about the physiological, organic and mechanical changes of the body during cupping therapy. A superior comprehension of the entire cupping system could be accomplished by connecting cupping therapy impacts with its mechanisms dependent on aforementioned speculations.

Cupping is a basic method of quick, solid, cadenced developments to animate muscles and is exceptionally useful in the treatment of a throbbing painfulness related with different illnesses. Accordingly, cupping can possibly improve personal satisfaction. There are two kinds of cupping. Dry cupping maneuvers the skin into the cup without dying. In wet cupping, the skin is removed so the blood enters the cup.

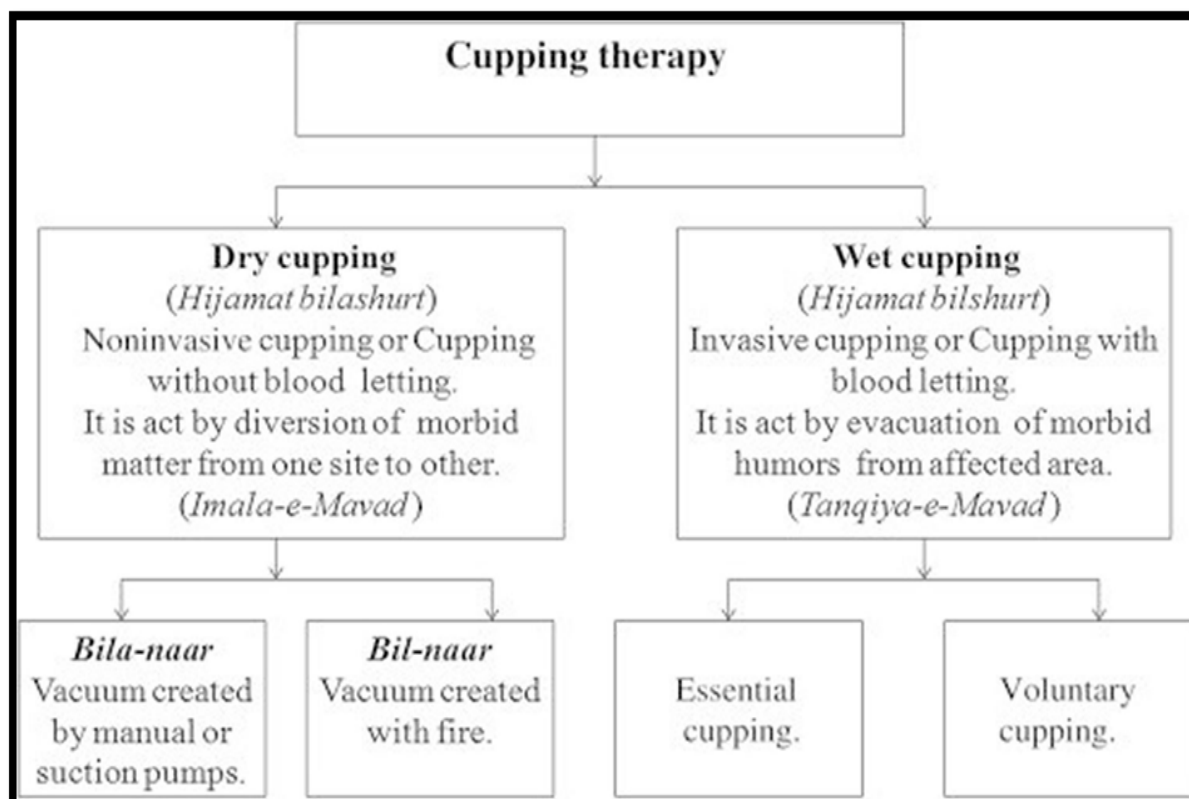


Fig. 1: Cupping Therapy Types

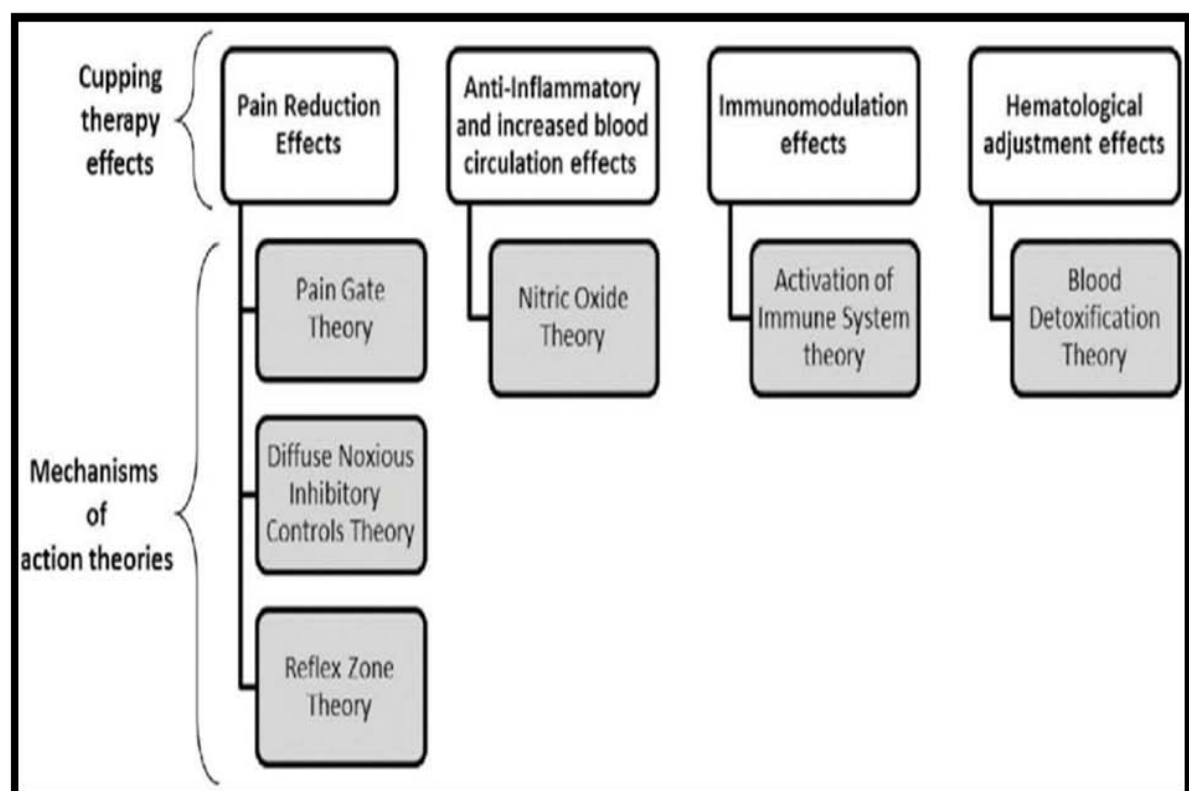


Fig. 2. Links between Cupping Therapy effects and Mechanisms of Action Theories

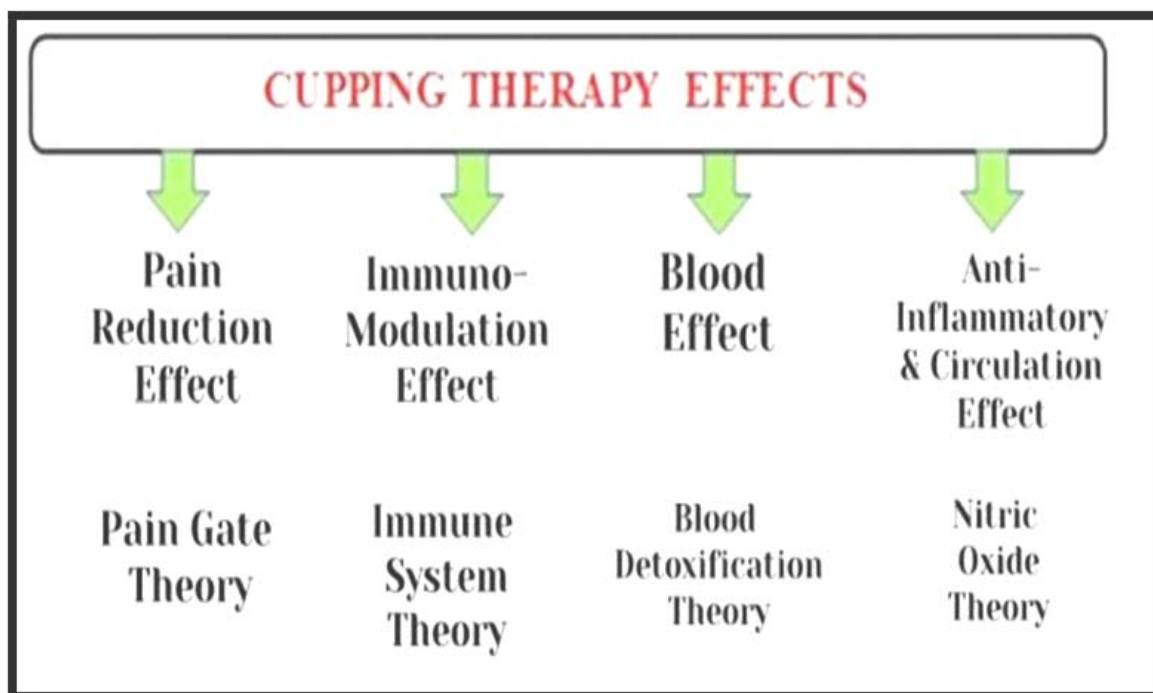


Fig. 3. Effects and Mechanisms Cupping Therapy

Mechanism of Action based on Various Theories

(i) Pain-Gate Theory (PGT)

This theory generally explains how the pain is spread from the place of its starting point to the mind, and how it is created in the cerebrum which drives back the efferent, defensive sign to the invigorated or harmed district. It is accounted for that nearby injury of the skin and slender vessels fills in as a non-receptive stimulus.

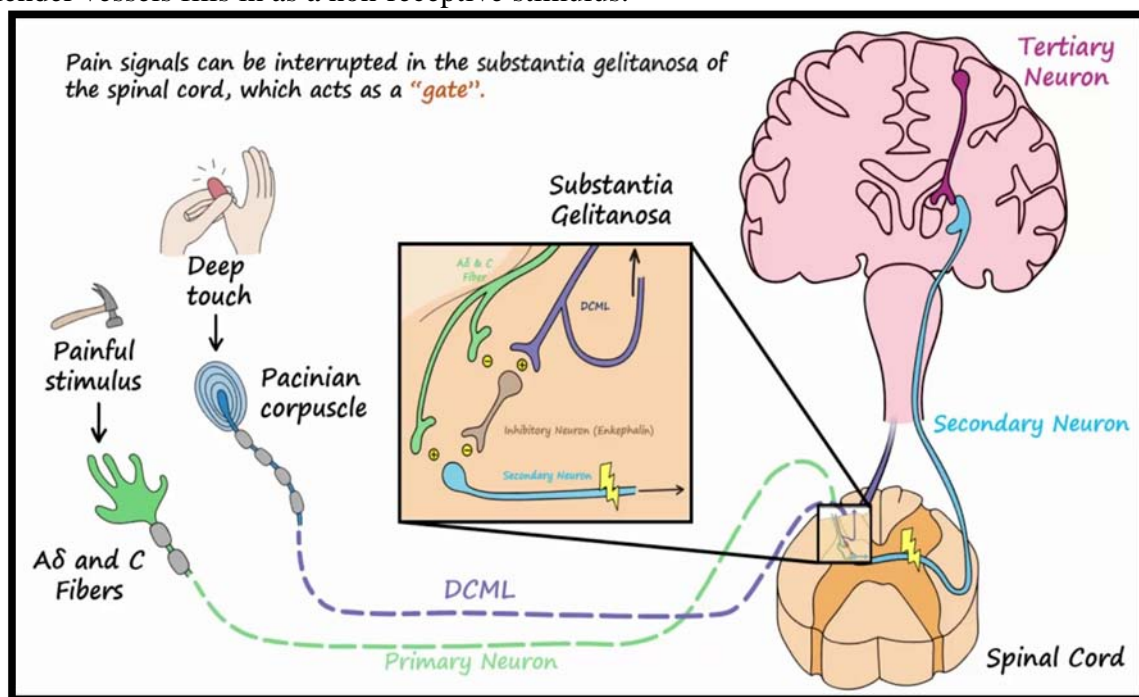


Fig. 4. Pain Gate Theory

The mechanism of wet cupping therapy (Al Hijamah) is started from the deterred blood that will be taken out from the skin, appropriately improving blood and lymphatic stream and lessening painful muscle fits, and this will have the ideal effect. Wet cupping can cause the production of endogenous nitric oxide (which is seen as a vasodilator) or wipes out oxidants, which diminishes oxidative pressing factor. Moreover, cuts of the skin can activate unavoidable inhibitory control, which hence goes probably as a nociceptive lift. This mechanism of action

has been explained by Pain-Gate Theory (PGT).

(ii) Diffuse Noxious Inhibitory Controls (DNICs)

An additional theory identified with pain decrease as a strategy for action of cupping therapy is Diffuse Noxious Inhibitory Controls. DNIC shows hindrance of action in joined or expansive energetic reach type nociceptive spinal neurons evoked by a second, spatially inaccessible, noxious stimulus.

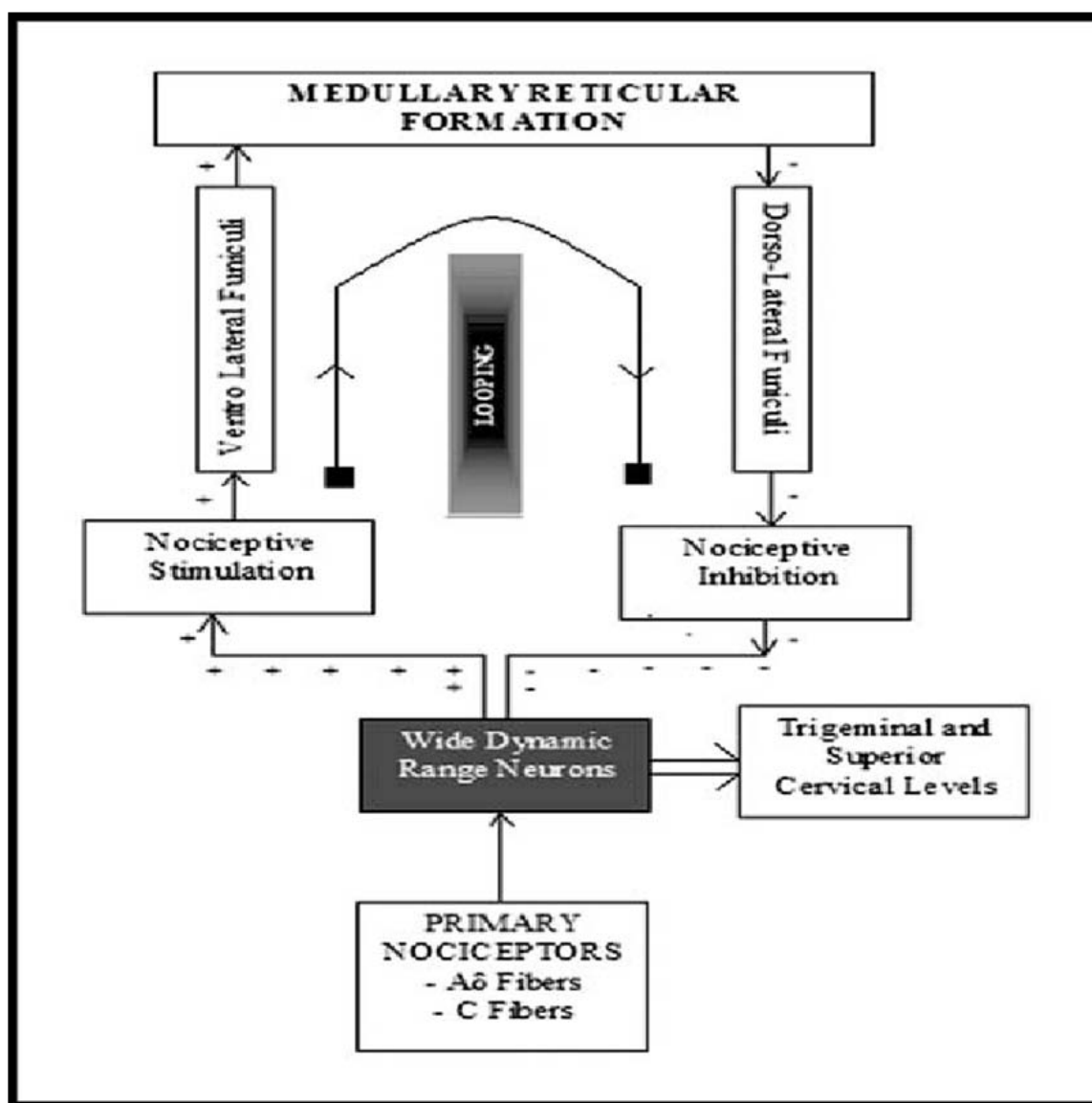


Fig. 5. Diffuse noxious inhibitory controls (DNIC)

(iii) Release of Nitric Oxide Theory

Nitric Oxide (NO) is demonstrating gas atom that parleys vasodilatation and controls blood stream and volume. NO controls circulatory strain, adds to the immune reactions, oversees neurotransmission and includes in cell separation and in a lot more physiological capacities. Cupping therapy could cause freedom of NO from endothelial cells and, along these lines, support certain valuable natural changes.

The elements of nitric oxide are; Vasodilatation, this gives more blood to region (has 2 way vasodilatation impacts) (a) Muscle relaxation, which fix spasms & (b) Anti-thrombotic, shields the blood vessels from thrombosis helps in decrease inflammation, stenosis of blood vessels as inhibit proliferation of the blood vessels walls.

(iv) Reflex Zone Theory

In cupping therapy, when the sullied organ pushes a sign to the skin during the autonomic nerves, the skin responds by getting delicate and painful with expanding. Skin receptors are set off when cups are applied to the skin. The whole technique will impact in the development of the blood dissemination and blood supply to the skin and the interior organs through the neural relations.

(v) Activation of Immune System Theory

According to the perspective of body invulnerability and safeguard, specialists start to understand the action of cupping therapy through adjusting immunoglobulin and hemoglobin, and its different immunological impacts. Cupping diminishes serum IgE and IL-2 levels and builds serum C3 levels which are

discovered to be strange in the immune system.

(vi) According to Hong *et al*

As per Hong *et al* cupping therapy works through making explicit changes in nearby tissue structures because of neighborhood negative pressing factor in the cups utilized which extends the nerve and muscle causing an increment in blood course and causing autohemolysis [15]. This mechanism projected by Hong *et al* might be acknowledged to make reference to that nearby regrettable pressing factor may influence tissue design and increment blood dissemination however not adequate to clarify advantages of cupping therapy in treating provocative infections, headache, migraine, hypertension and so on Anyway clarifies mechanisms of action in couple of infections to clarifying restorative impact of cupping therapy.

(vii) Wet Cupping Therapy

In wet cupping therapy, skin entry points are performed prompting a shallow injuries. Mechanical pressing factor, pain, anaerobic digestion give or take shallow cuts could create physiological and mechanotransduction signals. These signs can actuate or repress quality articulation. The outcome is activation of record factors by flagging falls which lead to actuate or hinder record of responsive objective genes.[16] This mechanism of action may underlie a portion of the neighborhood and systemic helpful impacts of cupping therapy.

(viii) Genetic Modulation Theory

In wet cupping therapy, skin slices are executed prompting shallow injuries. Mechanical pressing factor, pain, anaerobic digestion give or take shallow cuts could make physiological and mechanotransduction signals. These signs can trigger or prevent quality articulation. The impact is activation of record factors

by flagging falls which lead to trigger or upset record of responsive objective qualities. This mechanism of action may

cause a portion of the local and systemic restorative impacts of cupping therapy.

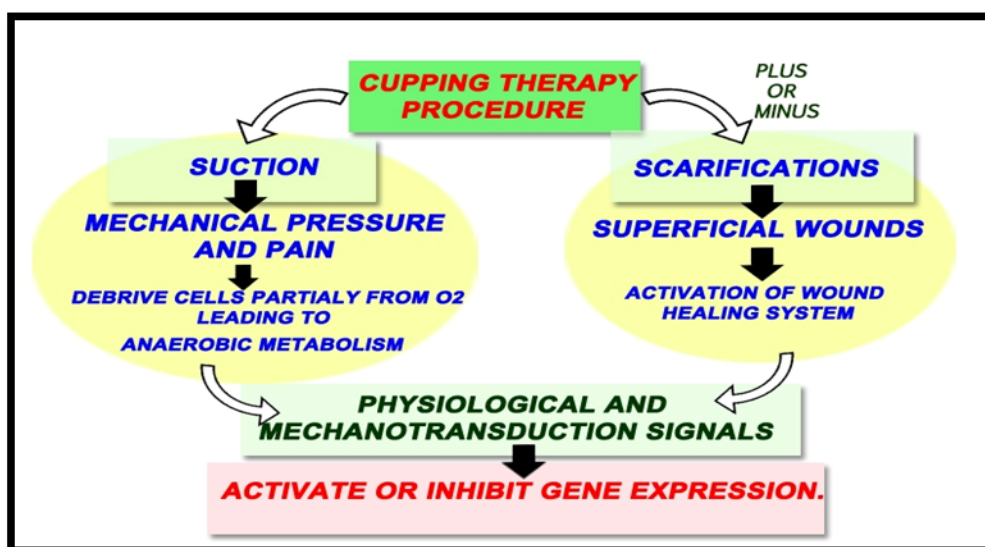


Fig. 6. Genetic Modulation Theory

(ix) Blood Detoxification Theory

This theory tends to the expulsion of poisonous substances from the influenced region where the cups are applied. As per the blood detoxification theory, there is a diminishing in the degree of uric corrosive, HDL, LDL and the sub-atomic design and capacity of hemoglobin (Hb) and other hematological changes. This theory clarifies how the body is assuaged of poisons and destructive materials through the basic mechanism of cupping therapy. In the light of physical science, for clearing the poisons, the negative pressing factor pull delivered by cupping benefits the extraction of the poisons created by the purulent liquid, exudation, and germs, just as the histolytic catalyst. Cupping additionally advances the development of granulation and the recuperation of wounds [17]. A few investigations detailed critical contrasts in large numbers of the biochemical, hematological and immunological boundaries between the venous blood and the cupping blood [17].

This paper recognized some potential mechanisms of cupping therapy dependent on specific speculations that clarify its different impacts. No single theory could clarify its full range of impacts. The gainful impacts of cupping therapy should be validated by enormous randomized clinical preliminaries, systematic surveys and meta-investigations in future. Fundamental logical creative examination is likewise expected to confirm the examined hypotheses about cupping alongside designing new speculations. Winning hypotheses on cupping therapy mechanism of action that are identified with Traditional Chinese Medicine, Unani Medicine or other conventional mending rehearses should be tended to in another imaginative investigation. Subsequent to evaluating numerous hypotheses and conversation, in short we reason that wet cupping is overwhelmed by control in (i) Neural, (ii) Hematological, and (iii) Immune system working Main impacts through choosing explicit application focuses may happen as:

CONCLUSION

- 1) Irritation of the immune system by producing local simulated inflammation followed by activation of complementary system and increase level of immune products such as interferon and tumour necrotizing factors.
- 2) Organize of traffic of lymph and increase in the flow of lymph in the lymph vessels.
- 3) Effect on thymus.
- 4) In the neural system effects occurs by regulation of neurotransmitters and hormones like serotonin, dopamine, endorphin, acetylcholine etc. In the haematological system, main effects occurs by these two pathways: (i) regulation of coagulation and anti-coagulation systems like decrease in the level of haematological element such as fibrinogen, (ii) decrease in the hematocrit followed by increase in the blood flow and in the end organ oxygenation.

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