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Adverse Effects of Unsafe *Hijama* (Cupping) – A Short Review

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ABSTRACT
Hijama (cupping), is a traditional therapeutic technique that involves creating suction on the skin followed by superficial incisions to draw out small amounts of blood. While it is believed to help remove toxins and promote healing when done properly, inappropriate or unregulated practice can pose serious health risks. Although wet cupping may offer therapeutic benefits when performed by trained professionals under hygienic conditions but inappropriate or unskilled practice can have serious negative consequences on health. The impact of abnormal elimination on the body is profound and multifaceted. Therefore, it is crucial that *Hijamah* is only performed by qualified practitioners following strict safety guidelines and individual patient assessment.

Keywords: *Hijamah; Hijama; Cupping; Wet Cupping; Dry Cupping; Unani Medicine.*

INTRODUCTION

Hijamah has been used since ancient times. The Arabic term "*Al-Hijamah*" has multiple meanings, including:

- The process of removing scalp hair
- The application of cups (*Seenghi*) [1]

Al-Hijamah is a type of regimen that aims to restore humoral balance by redirecting or removing harmful substances. It has been used to treat various medical conditions since ancient times.[1] *Hijamah* is classified into two types based on its method of application:

- ***Hijamah-Bila-shurt*** (Non-invasive cupping or Dry cupping)
- ***Hijamah-Bil-Shurt*** (Invasive cupping or Wet cupping, which involves scarification)

For invasive cupping, the process begins by placing cups on the affected area and creating moderate vacuum pressure for a short period. This is done repeatedly until the area becomes reddish and swollen. Following this, *shurt* (incisions) are made carefully. If the patient is weak, only one incision is needed, but it should be wider and deeper. If the blood is thick or concentrated, incision is performed twice: one to promote diluted blood flow and the other for concentrated blood. If the blood contains impurities, an additional incision may be done to clarify it. In summary, if only a small amount of bleeding is required, one incision is sufficient, while multiple incisions may be necessary for substantial bleeding.[1]

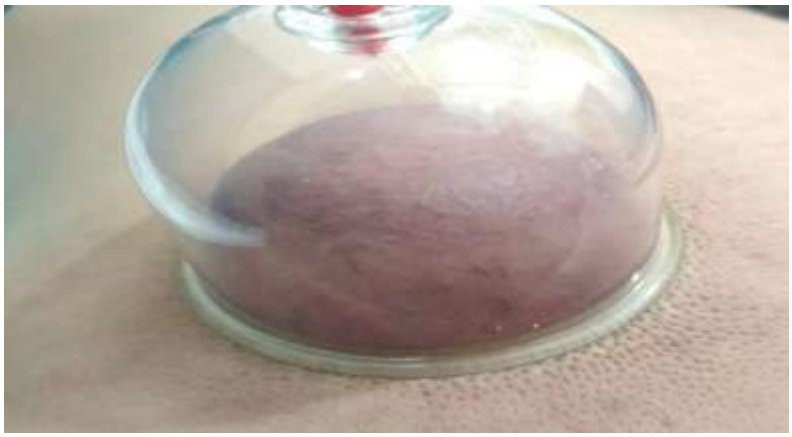

Fig. 1: Skin uplift in cupping due to negative pressure

Thus, wet cupping is a practice where suction is applied to certain skin areas, followed by small incisions to induce controlled bleeding. This method is thought to eliminate "bad blood" and enhance circulation. Although supporters advocate for its various health benefits, overdoing wet cupping can result in negative effects.

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It is typically regarded as a safe regimen with a few minor problems and side effects. Reports regarding the safety of cupping therapy are however lacking. While only a small number of studies highlighted potential problems, the majority of completed studies largely addressed its efficacy. Preventable and non-preventable issues may often be separated out. The most well-known adverse effects that result from cupping include erythema, edema, and ecchymosis. Reports of skin burning have also been made. The following factors particularly in older adults may contribute to them excessive alcohol consumption, prolonged cupping therapy exposure, sensitive skin, and fire use. When high vacuum pressure is applied to the skin for more than 20 minutes during cupping therapy, the epidermal layer and the dermal base of the skin may separate. This particular adverse effect was linked to pumping cupping therapy. In one case report, the patient had cupping therapy for around 40 minutes over the lower back the patient experienced severe pain as soon as the cups were removed and later on bullae and crusting developed over the application site. A patient who traveling in flight has been observed to have skin injuries and changes in atmospheric pressure have been identified as a risk factor for these injuries. This resulted in various blisters, redness in different shades, petechiae, and ecchymosis. Failure to rigorously adhere to infection control procedures may result in exposure to blood-borne illnesses. For example, following cupping therapy, factitial panniculitis and herpes simplex virus infection have been reported [2].

Despite its historical use, wet cupping can be associated with a range of complications. Understanding these risks is essential for practitioners and patients to ensure safe and effective use of this therapy. So, if excess blood is drawn by cupping or done by wrong way leads to *istefragh-e-ghair tabae* (abnormal elimination) and various harmful effect are seen in human body. The impact and overall effect are mentioned below:

Blood Loss and Hypovolemia: One major risk of excessive wet cupping is blood loss. Although traditional wet cupping involves drawing only a small amount of blood, excessive treatments can lead to significant blood loss.

A decrease in blood volume can lead to hypovolemia, characterized by symptoms such as weakness, fatigue, dizziness, muscle cramps, thirst, reduced skin elasticity, orthostatic tachycardia, and low blood pressure (hypotension). If not managed, there is a risk that hypovolemia could progress to shock, which would manifest with peripheral vasoconstriction, cyanosis, decreased urine output (oliguria), and changes in mental status.[3]

Fig. 2: Wet cupping (Hijamah) exhibiting blood loss

Anaemia: Frequent or excessive wet cupping can lead to anemia, characterized by a reduction in red blood cells (RBCs) or hemoglobin levels. The loss of blood and decreased RBC count can hinder oxygen transport and negatively impact overall health.

Anemia may manifest as persistent fatigue and weakness, pale or yellowish skin, irregular heartbeats, shortness of breath, excessive sleepiness, chest or back pain, headaches, constantly cold hands and feet, and a general lack of energy, making it difficult to carry out daily tasks. In cases of severe iron deficiency anemia, prolonged blood loss from cupping therapy can lead to the development of cardiac hypertrophy.[4,5]

Electrolyte Imbalance: Excessive blood loss from wet cupping can disturb electrolyte balance, impacting levels of sodium, potassium and calcium etc. Hyponatremia is the most common electrolyte disorder and often presents with neurological symptoms such as headaches, confusion, nausea, and delirium. Potassium imbalances can lead to cardiac arrhythmias. Hypokalemia is characterized by weakness, fatigue, muscle twitching, and in severe cases, generalized body weakness known as hypokalemic paralysis. Hypocalcemia can also result in cardiac arrhythmias.[6]

Skin Damage: Skin damage is another potential complication of wet cupping. Additionally, some patients may experience allergic reaction or sensitivity to the cupping materials. Cupping can lead to notable skin-related issues, including bruising, skin irritation, and infection.[7]

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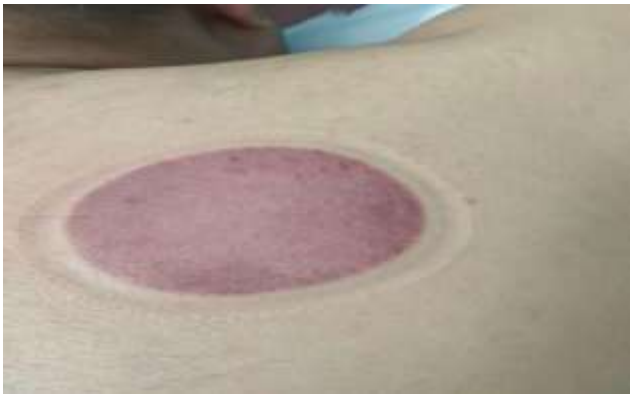

Fig. 3: Skin changes (Hyperaemia) after cupping

Hematoma Formation: Hematomas can result from the suction applied during wet cupping and the subsequent skin incisions. Blood accumulation under the skin can cause swelling, pain, and discoloration. The risk of hematoma formation can be affected by the technique used and the individual's skin and vascular conditions. The most common adverse effects (AEs) associated with cupping therapy are scar formation, followed by burns. Other reported AEs include headaches, itching (pruritus), dizziness, fatigue, muscle tension, anemia, nausea, blister formation (bullae), small hematomas or pain at the cupping site, abscess formation, skin infections, insomnia, hyperpigmentation, and vasovagal attacks.[8]

Infection: Pathogens may enter through skin incisions, causing local or systemic infections. Infection is a notable risk with wet cupping due to the skin incisions and the potential use of unsterilized equipment. Improper technique during wet cupping can raise the risk of infections. Scar formation, burns, headaches, itching (pruritis), dizziness, anemia, and panniculitis are relatively common side effects of cupping therapy, but they are typically mild and resolve on their own. However, wet cupping can compromise the skin's protective barrier, increasing the risk of skin infections, abscesses, and other infectious complications.[9]

Systemic Reactions: Systemic reactions to wet cupping can include dizziness, fainting, and hypotension, particularly if the procedure results in significant blood loss or dehydration.[10] These reactions may be more prevalent in individuals with underlying health conditions or those who are not adequately hydrated.

Allergic Reactions: Allergic reactions to the materials used in cupping or substances applied to the skin can occur. These reactions may range from mild irritation to, in rare cases, severe anaphylaxis.[10] A skin allergy may develop immediately after the cupping procedure, leading to the appearance of multiple red, blanchable, well-defined, rounded, erythematous skin lesions that were not oozing.[11]

Immune System Impact: Excessive blood loss and skin trauma from wet cupping can affect the immune system. Blood loss and potential infections from improper technique may impair the body's ability to fight off pathogens and recover from illnesses. Allergies are immune-mediated conditions resulting from an overreaction of the immune system. Anemia can also influence the development of the immune system. Iron deprivation functions as a natural immune defense mechanism against invading microbes.[12]

CONCLUSION

Significant blood loss can severely disrupt the body's normal physiological functions. When too much blood is lost, the production and maintenance of healthy red blood cells may be hindered. Ongoing or chronic bleeding often leads to anemia, which involves a reduction in hemoglobin levels and a diminished ability to transport oxygen throughout the body. A drop in circulating blood volume due to blood loss can also lower both cardiac output and blood pressure. Initially, the body attempts to compensate by increasing the heart rate and narrowing the blood vessels. However, if the bleeding is extensive or continues for too long, these adaptive responses may fail, potentially resulting in hypovolemic shock—a critical condition where tissues and organs do not receive enough blood. To make up for the decreased oxygen supply, breathing rate may also rise, placing additional stress on the lungs and causing symptoms like rapid breathing and shortness of breath. Reduced blood flow to the kidneys may impair their filtering function, potentially leading to acute kidney injury, which is marked by elevated levels of waste products such as creatinine and urea in the bloodstream. Likewise, inadequate blood supply to the brain can cause dizziness, confusion, or even loss of consciousness. In extreme or prolonged cases, neurological damage or coma may occur.

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