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CUPPING THERAPY

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Abstract: Traditional cupping therapy (CT) has been around for a long time and is still used today to treat many different kinds of medical issues. Still, researchers have yet to pin down exactly how (CT) works. Looking at CT through the lens of contemporary medicine, this review set out to determine how it might work and provide some explanations for its effects. A search was conducted using keywords in the English publications in PubMed, Cochrane Library, and Google Scholar. From the 223 articles that were found, 149 records were reviewed and 74 articles were deemed irrelevant and removed. Of the 75 full-text publications that were considered for this review, 64 were ultimately included. There are six competing explanations for the benefits of cupping therapy. Nitric Oxide theory may provide an explanation for the calming effects on muscles, alterations in local tissue structures, and improvements in blood circulation. The Activation of immune system theory may explain the hormonal changes and immunological effects. According to the "Blood Detoxification Theory" heavy metals and waste are eliminated while toxins are released. These theories can complement one another or even be used interchangeably to treat different diseases and ailments. It would appear that the many impacts of cupping cannot be adequately explained by a single theory. The aforementioned theories require further investigation to either confirm or disprove them, and future research should also aim to develop novel conceptualizations of CT.

I. INTRODUCTION

As a form of traditional medicine, cupping therapy (CT) has a long history of use in various cultures around the world. Its use for a wide variety of medical issues dates back to thousands of years, to the time when it was popular in ancient Egypt, China, and the Middle East. The exact processes underlying its therapeutic effects are still unknown, although its long history of use, and this has piqued the interest of contemporary medical research. Looking at CT through the perspective of modern medicine, this review explores its possible action mechanisms in an effort to decipher its mystery. To better understand the physiological mechanisms by which CT affects the human body, this investigation aims to synthesise previous literature and research results. The studies that were considered for inclusion were found through a thorough search of reputed databases such as Google Scholar, PubMed, and the Cochrane Library.

A more complex picture emerges as a result of this methodical procedure, which uncovered six well-known hypotheses put forward to explain the effects of CT. Every theory presents a unique viewpoint on the ways in which CT interact with the complex systems of the body, that range from decreasing pain to immune modulation. The lack of a cohesive explanation, even with these new insights, has prompted calls for more research and new ways of thinking about CT in the context of contemporary medicine. Embark on a captivating journey as we delve into the complexities of CT. Join us as we uncover the mysteries of this tradition therapeutic practice by exploring the intersection of ancient wisdom and modern science. We aim to advance the knowledge of CT and its potential healthcare applications through interdisciplinary conversation and diligent inquiry, bridging the divide between tradition and modernity, shown in figure 1.

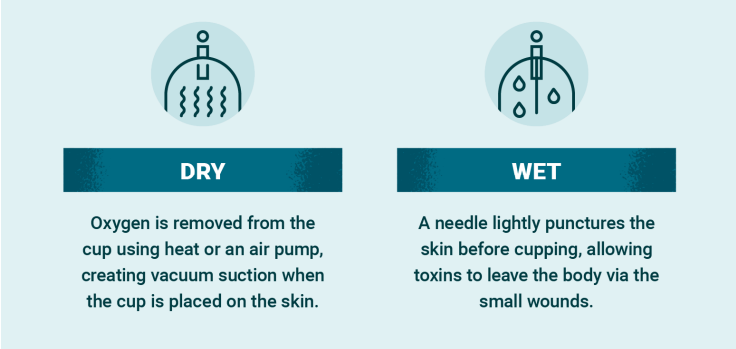

Fig 1: Types of Cupping

2. LITERATURE SURVEY

Investigated in this study are the local physiological effects of LLLT therapy and CT on the human skin tissues. Lighting experiments using long-lived light-emitting diodes (LLLTs) require a 650 wavelength laser diode in addition to 660 nm, 810 nm, and 904 nm LEDs. The results [6] demonstrate that local muscle activation and tension relief can be achieved with LLLT, CT, or CT followed by LLLT. Subjects also noted less tension in specific areas of their muscles following these treatments. Among these three options, the most effective sequence is CT followed by LLLT. Among these three options, the most effective sequence is CT followed by LLLT. Additionally, LLLT can alleviate pain after treatment and decrease inflammation of pot marks.

In order [7] to facilitate safe and effective communication amongst the therapeutic hiking group, the protocol includes methods for efficiently creating, distributing, and updating keys. The protocol's distributed architecture makes it highly versatile and adaptable, even in situations with partial coverage. To test how well our proposed protocol works, we run simulations. In our [8] acoustic hologram simulations and lens modeling, we utilized these acoustic properties. Because the combination of the piezoelectric ceramic and water-based medium improved the acoustic impedance matching, the composite lens in the simulations produced a pressure amplitude that was 145% greater than the photopolymer lens. Printing out a lens cavity, molding silicone rubber, and molding epoxy composite lenses were all steps in the process of creating a prototype for a composite lens. In contrast to the photopolymer lens, which displayed deformed edges, the built composite lens remained completely flat.

Millions of people [9] all over the globe suffer from Diabetes Mellitus (DM), a metabolic disease. When combined with closed-loop automated prescription drug administration systems, continuous glucose monitoring (CGM) significantly reduces the risks overall hyperglycemia in DM patients, making it an essential component of diabetes management. Nevertheless, drug infusion and intrusive blood glucose monitoring are common components of such treatments. In order [10] to combine the decisions made by deep learning algorithms such as bilateral temporal convolutional network, 1-dimensional convolutional neural network, and bidirectional long short-term memory, the proposed framework makes use of recent datasets and employs the ensemble learning technique. To a certain extent, deep learning algorithms can do feature extraction on their own.

3. PROPOSED METHODOLOGY

We aim to provide a comprehensive overview of the mechanisms underlying the therapeutic effects of cupping therapy, Shown in figure 2, offering valuable insights for both researchers and healthcare practitioners by following this systematic methodology:

1. **Literature Search Strategy:** Utilize electronic databases such as PubMed to identify relevant English language articles. Keywords for the search may include variations of "cupping therapy," "mechanism of action," "effects," and related terms like "Hijama." Employ Boolean operators and Medical Subject Headings (MeSH) terms to refine the search and ensure inclusivity.
2. **Inclusion and Exclusion Criteria:** Inclusion criteria may involve studies focusing on the mechanisms of action of CT from a modern medical perspective. Exclude studies that are not written in English, those lacking relevance to the topic, or those with inadequate methodology or reporting.
3. **Screening Process:** Find articles that could be of interest by doing a preliminary screening using only the titles and abstracts. Exclude articles that clearly do not meet the inclusion criteria. Retrieve fulltext articles for further evaluation if they meet initial screening criteria or if there is uncertainty.
4. **Data Extraction:** In order to retrieve useful information from the included studies, such as the study's design and sample characteristics, intervention details, outcome measures, and proposed mechanisms of action. Ensure consistency in data extraction across reviewers to minimize bias.
5. **Quality Assessment:** Use appropriate tools to determine the efficacy and risk of bias of the included studies. For trials that are randomized (RCTs), use the Cochrane Library's Risk of Bias tool. For observational studies, use the Newcastle-Ottawa Scale. Consider factors such as study design, sample size, blinding, randomization, and followup duration.

6. **Synthesis of Findings:** Summarize the identified mechanisms of action proposed in the included studies. Identify common themes and areas of consensus among the theories. Discuss discrepancies or conflicting evidence and potential explanations.
7. **Critical Appraisal and Discussion:** Critically evaluate the strengths and limitations of the proposed mechanisms of action. Think about new ways of thinking about CT, what it means for clinical practice, and where the field should go from here in terms of research.

Fig.2. ST techniques

4. RESULT AND ANALYSIS

This review of cupping therapy (CT) explores the various therapeutic effects of this modality by investigating its possible action mechanisms. Two of the proposed mechanisms for pain reduction have been proposed: thePain-Gate Theory and the Scattered Noxious Inhibitory Controls theory. The former postulates that CT stimulates the modulation of pain pathways in the CNS, while the latter suggests that CT activates nerve fibers in order to inhibit pain signals. An additional layer is added by Reflex Zone Theory, which suggests that CT affects the perception of pain through particular reflex regions on the body.According to the Nitric Oxides Theory, which explains how CT works, it may enhance nitric oxide production, which in turn relaxes muscles and dilates blood vessels. The Awakening of the Immunity System concept proposes that CT causes hormonal changes by stimulating the immune system, which in turn has immunological effects. In addition, according to the Blood Detoxification Theory, CT can help the body eliminate waste products, heavy metals, and toxins by improving circulation of blood and lymphatic drainage. These potential processes may work in tandem, complement one another, or even work as stand-ins for one another to alleviate a wide range of medical issues. But even with these findings, we still don't fully understand how CT works, which shows that we need more studies to confirm and improve these hypotheses. Further research could lead to new ways of thinking about CT, which would improve its use in contemporary medicine and open up new therapeutic possibilities, shown in figure 3.

	Cupping therapy (n=15)	Passive stretching (n=15)	t	p
Before- MVC (μV)	†175.4 ± 98.94	176.0 ± 58.08	-.202	.984
After- MVC (μV)	214.9 ± 115.07	210.8 ± 71.75	.118	.072
Difference	39.5 ± 50.50	34.8 ± 39.86	.285	.778
t	-3.035	-3.384		
P	.009*	.004*		

†mean ± standard deviation
Fig 3: Comparison of Cupping Therapy and passive stretching on Pain Threshold

5. CONCLUSION

Finally, the cupping therapy (CT) review sheds light on the treatment's possible action mechanisms and benefits. By delving into six important theories, such as those pertaining to pain reducing, easing muscles, immunological effects, and toxicity removal, CT becomes clear as a versatile therapeutic tool with numerous uses in different medical fields.

Some possible theories that explain how CT works to manage pain include the Pain-Gate Theory, the Reflex Zone Theory, and the Diffuse Noxious Inhibitory Controls. Also, according to the Nitric Oxide Theory, CT helps relax muscles and alter tissues by increasing nitric oxide production. According to the theory known as The Stimulation of the Immune System CT can have immunomodulatory effects by inducing hormonal changes and stimulating immune responses. In addition, the Blood Detoxing Theory highlights the supposed capacity of CT to facilitate the removal of toxins and to improve detoxification processes by means of enhanced lymphatic drainage and blood circulation. Further research is needed to validate and refine these theories, as an accurate description of CT's therapeutic effects is still elusive, considering the overwhelming evidence supporting these mechanisms. In order to further integrate CT into contemporary medical practices and increase its therapeutic potential, the review also stresses the need of new ways of thinking about CT. Clinicians can benefit from a better understanding of CT's effectiveness and its optimal use in clinical settings if future studies succeed in revealing its underlying mechanisms. In sum, this review's results highlight the need for more study into cupping therapy's therapeutic potential so that it can be fully utilized in the treatment of a wide range of illnesses and conditions.

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