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OPTIMIZING INCISION DEPTH IN SUNNAH CUPPING THERAPY FOR SAFETY AND THERAPEUTIC EFFICACY

OPTIMALISASI KEDALAMAN SAYATAN DALAM BEKAM SUNNAH UNTUK KEAMANAN DAN EFIKASI TERAPEUTIK

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Abstract

This study aims to evaluate the impact of incision depth in Sunnah cupping therapy on safety and therapeutic efficacy, with a focus on identifying the optimal incision depth that minimizes risks while maximizing therapeutic benefits. The method used is a literature review, gathering data from scientific databases such as PubMed, Scopus, and Google Scholar using keywords related to cupping therapy, incision depth, and dermatological aspects. The findings reveal that an incision depth of 0.5 mm to 1 mm in the dermis layer not only avoids damage to the deeper hypodermis but is also sufficient for the effective extraction of stagnant blood. This very light incision provides advantages in enhancing blood circulation and facilitating the extraction of stagnant blood necessary in cupping therapy. This approach, involving extremely light incisions, cannot be considered invasive and is highly suitable for enhancing therapy efficacy without compromising patient safety. Further discussion in the study highlights that with the correct incision technique, cupping therapy can become safer and more effective, encouraging significant improvements in immune response and tissue regeneration. The conclusion of this study underscores the importance of standardizing procedures and adequate training for cupping practitioners to ensure safe and effective practices. Further research is recommended to strengthen the evidence related to the effectiveness and safety of cupping therapy and to develop more detailed standard protocols.

Keywords : dermis targeting in cupping, incision depth standards, safety in cupping techniques, therapeutic efficacy of cupping, training for cupping therapists

Abstrak

Penelitian ini bertujuan untuk mengevaluasi pengaruh kedalaman sayatan dalam terapi bekam Sunnah terhadap keamanan dan efikasi terapi, dengan fokus pada identifikasi kedalaman sayatan yang optimal yang meminimalkan risiko sambil memaksimalkan manfaat terapeutik.

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Metode yang digunakan adalah tinjauan literatur, mengumpulkan data dari database seperti PubMed, Scopus, dan Google Scholar menggunakan kata kunci yang berkaitan dengan kedalaman sayatan dalam bekam dan aspek dermatologisnya. Hasil penelitian mengungkapkan bahwa kedalaman sayatan antara 0,5 mm hingga 1 mm pada lapisan dermis tidak hanya menghindari kerusakan pada lapisan hipodermis yang lebih dalam tetapi juga cukup untuk mengeluarkan darah statis yang efektif. Sayatan yang sangat ringan ini memberikan keuntungan dalam meningkatkan sirkulasi darah serta memfasilitasi ekstraksi darah stagnan yang diperlukan dalam terapi bekam. Pendekatan ini, yang melibatkan sayatan yang sangat ringan, tidak dapat dianggap sebagai tindakan invasif dan sangat cocok dalam meningkatkan efikasi terapi tanpa mempertaruhkan keselamatan pasien. Diskusi lebih lanjut dalam penelitian ini menyoroti bahwa dengan teknik sayatan yang tepat, terapi bekam dapat menjadi lebih aman dan lebih efektif, mendorong perbaikan yang signifikan dalam respons imun dan regenerasi jaringan. Kesimpulan dari studi ini menegaskan pentingnya standarisasi prosedur dan pelatihan yang memadai bagi praktisi bekam untuk memastikan praktik yang aman dan efektif. Penelitian lebih lanjut disarankan untuk memperkuat bukti terkait efektivitas dan keamanan terapi bekam serta mengembangkan protokol standar yang lebih terperinci.

Kata Kunci : efikasi terapi bekam, kedalaman sayatan bekam, keamanan teknik bekam, pelatihan terapis bekam, standar prosedur bekam

1. INTRODUCTION

Sunnah cupping, or hijama, as a traditional therapeutic practice, has become increasingly relevant in the context of modern medicine due to its wide-ranging potential benefits. This therapy is recognized for its ability to relieve pain, improve blood circulation, and promote relaxation. It is also gaining clinical recognition in the treatment of various conditions such as hypertension and migraines (Alshareef et al., 2021; Rahman et al., 2020; Sajid, 2016). Studies indicate that cupping not only provides direct therapeutic advantages but also offers opportunities for integration into holistic medical approaches (Muhtar, 2022; Alkhamaiseh et al., 2023).

In terms of safety and effectiveness, the depth of incisions during cupping therapy is a critical factor. Improper incisions may increase the risk of complications such as infection and bleeding (Mushtaq et al., 2024; Ghazy et al., 2018). Therefore, it is essential to understand the targeted skin layer in this procedure, namely the dermis, where small blood vessels and sensory nerves are located (Sobali et al., 2021). Research further highlights that proper incision depth not only impacts therapeutic efficacy but also plays a crucial role in patient safety (Ghazy et al., 2018; Mushtaq et al., 2024). Standardized procedures and practitioner training are imperative to ensure safe and effective implementation in daily practice (Mushtaq et al., 2024; Aboushanab & Alsanad, 2021).

The objective of this literature review is to assess and provide evidence-based recommendations regarding the practice of Sunnah cupping, particularly concerning incision depth and safety aspects. The evaluation and development of effective safety standards will further strengthen the aim of integrating cupping therapy into modern medical care, reinforce patient confidence in its safety, and affirm the therapeutic value of this traditional practice.

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2. RESEARCH METHOD

This research employed a systematic literature review method by collecting data from scientific databases such as PubMed, Scopus, Web of Science, and Google Scholar using keywords including “Cupping Therapy,” “Hijama,” “Safety in Cupping,” “Depth of Incision in Cupping,” and “Dermatological Aspects of Cupping.” The study included articles published in peer-reviewed journals within the last ten years, with a specific focus on incision depth and safety standards in Sunnah cupping. Exclusion criteria consisted of non-empirical articles, publications older than ten years, and single case reports. Following data collection, a narrative analysis was conducted by integrating and synthesizing findings from relevant literature to evaluate best practices in cupping therapy, with the aim of generating evidence-based recommendations for safer and more effective cupping practices.

3. RESULTS AND DISCUSSION

Skin Function and Structure

The human skin, as the largest organ in the body, plays a vital role in various aspects of health and therapy, including cupping practices. It consists of three main layers, each with distinct functions and structures: the epidermis, dermis, and hypodermis.

The epidermis is the outermost layer, functioning as the first line of defense against the external environment. This layer comprises keratinocyte cells that produce keratin, a protein essential for skin strength and protection (Gonzalez-Bravo et al., 2022; Ren et al., 2021). The thickness of the epidermis varies from approximately 0.05 mm on the eyelids to 1.5 mm on the palms and soles. Lacking blood vessels, the epidermis plays a critical role in physical protection against pathogens and minimizing water loss from the body (Gonzalez-Bravo et al., 2022; Boer et al., 2016). Its barrier function, especially the stratum corneum, is essential for maintaining skin homeostasis and shielding the body from external factors such as ultraviolet radiation and chemicals (Gonzalez-Bravo et al., 2022; Dermitzakis et al., 2025).

The dermis, located beneath the epidermis, is thicker and rich in collagen and elastin, providing strength and elasticity to the skin (Orsmond et al., 2021). It also supplies nutrients to the epidermis and plays a crucial role in thermoregulation through its blood vessels, nerves, and sebaceous glands. In cupping therapy, the dermis is the primary target, particularly when the goal is to enhance blood circulation. The dermis ranges in depth from 0.5 mm to 4 mm, depending on body location and skin thickness. Proper incisions into the dermis enable therapeutic effects such as improved blood flow and detoxification through blood extraction (AlBedah et al., 2019; Boyce & Lalley, 2018).

The hypodermis, or subcutaneous layer, is the deepest skin layer, consisting of adipose tissue that serves as insulation and cushioning for underlying organs (Bojanowski et al., 2020). It also functions in energy storage and thermal insulation. The thickness of the hypodermis can vary significantly, often exceeding 8–10 mm depending on the location and individual. Although the hypodermis is not directly targeted in cupping therapy, understanding its depth is important to avoid overly deep incisions that could damage underlying structures (Bojanowski et al., 2020; Boyce & Lalley, 2018).

Each of these skin layers—epidermis, dermis, and hypodermis—plays a vital role that must be understood in the context of cupping therapy techniques, which aim to improve skin health and blood circulation. Understanding the skin’s structure and function is essential to determine the appropriate incision depth in cupping to ensure both safe and effective treatment.

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The Concept of Stagnant Blood in Cupping Therapy

In traditional medicine, the concept of stagnant blood refers to blood circulation that has become impaired or sluggish within the body's system, potentially triggering various health issues (AlBedah et al., 2019). In Traditional Chinese Medicine, blood stagnation is often associated with chronic pain and organ dysfunction, as stagnant blood disrupts the flow of Qi, or vital energy (Park et al., 2015). This stagnation is seen not only as a physical problem but also as a holistic issue that can affect overall well-being. This is especially relevant given findings that cupping therapy may help resolve such problems by restoring and optimizing blood circulation (AlBedah et al., 2019).

Stagnant blood tends to accumulate in the dermal layer, which contains numerous small blood vessels, including capillaries. Factors such as injury or inflammation can reduce blood flow to specific areas, potentially triggering pain (AlBedah et al., 2019). Cupping therapy specifically targets areas suspected of containing stagnant blood. By creating a vacuum using cups, the negative pressure helps draw blood toward the surface of the skin, theoretically encouraging the release of stagnant blood and stimulating fresh circulation (Wang et al., 2020). Research indicates that cupping can enhance microcirculation and reduce pain (Hou et al., 2020). In other words, physiologically, the therapy may create a more favorable condition for the body to heal by stimulating blood flow to previously obstructed areas.

Support for the effectiveness of cupping therapy in addressing stagnant blood is found in various empirical studies. Significant improvements in microcirculation and pain relief after cupping therapy strengthen the idea that this physical intervention contributes to blood clearance and revitalization within the circulatory system (Rahman et al., 2020). Moreover, research has shown that the effects of cupping are not limited to pain relief but may also positively influence other circulation-related aspects, such as lowering blood pressure (Aprilyadi & Zuraidah, 2022; Candrawati & Sukraandini, 2021). As such, cupping therapy is increasingly recognized as an alternative or complementary method in modern medical practice for addressing circulatory disorders and chronic pain.

Overall, understanding and applying the concept of stagnant blood in cupping therapy offers opportunities to integrate traditional healing methods with modern medical approaches, especially as growing evidence supports the mechanisms and benefits of this therapy in enhancing physiological function and alleviating disease (Park et al., 2015; Arai et al., 2017).

Specifications of Incision Depth in Sunnah Cupping

The depth of incisions in cupping therapy, particularly within the range of 0.5 to 1 mm, is a crucial aspect of cupping as an alternative medical practice that emphasizes the efficient extraction of stagnant blood. The dermis, located just beneath the epidermis, is a skin layer rich in blood vessels and plays a vital role in immune responses and wound healing (Henn et al., 2020; Munoz et al., 2020). Targeting the dermis at such minimal depths in cupping avoids damage to the deeper hypodermis while ensuring effective stagnant blood removal and minimizing the risk of serious injury to underlying tissues or organs. These shallow incisions are sufficient to reach capillaries in the dermis, which are key elements in the bloodletting mechanism central to this therapy (Lilin, 2024).

Studies have shown that cupping techniques involving minimal incision depth can enhance blood perfusion in the treated area through petechiae formation and vasodilation, thereby supporting tissue healing (Dalton & Velasquez, 2017; Lee et al., 2019; Hou et al., 2020). The effectiveness of these shallow incisions in accessing dermal capillaries has been

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validated in numerous studies, where the application of suction cups on the skin also stimulates blood flow to the affected area, increasing oxygen and nutrient delivery needed for tissue regeneration (Stephens et al., 2020; Kim et al., 2019; Zhou et al., 2017).

The mechanisms underlying cupping's effects include the stimulation of growth factors and cytokines essential for healing, as well as the release of nitric oxide that promotes vasodilation and enhances local blood circulation. This contributes to the restoration of dermal structure and revitalization of surrounding tissue (AlBedah et al., 2019; Dalton & Velasquez, 2017; Lee et al., 2019). Therefore, it is essential for cupping practitioners to pay special attention to incision techniques and depth to ensure that therapy is not only effective but also minimizes the risk of deeper tissue damage, while efficiently targeting small blood vessels in the dermis that are critical in treatment outcomes.

Analysis of Incision Depth in Sunnah Cupping

In analyzing incision depth in cupping practices, a thorough understanding of skin structure and the impact of incision depth is vital to maximize therapeutic effectiveness and minimize complications. The efficacy of cupping therapy highly depends on achieving the appropriate incision depth. Incisions that are too shallow may fail to draw sufficient blood, thereby compromising the therapeutic outcome (Subadi et al., 2020; Herman et al., 2024). Conversely, overly deep incisions can lead to excessive bleeding and elevate the risk of infection, potentially resulting in serious complications (Astuti, 2019).

Several studies suggest that wet cupping therapy, which involves making incisions on the skin, contributes to improved blood flow and pain relief (Herman et al., 2024; Sucipto et al., 2023). Moreover, incisions made at optimal depths can stimulate healing processes. As indicated by Andi and Setyawan (2022), such stimulation may promote endorphin release, which acts as a natural analgesic. Similarly, research by Surahmat and Damayanti (2019) shows that knowledge of correct incision depth can influence therapeutic outcomes, such as reductions in blood pressure among hypertensive patients.

Anatomical considerations of the skin, particularly the dermis layer, are essential in cupping practice. Targeted incision depth not only affects therapy outcomes but also poses potential risks of damaging underlying tissues critical to pain control and hemodynamic stability. With a solid understanding of incision depth and its associated risks, practitioners can enhance the safety and effectiveness of cupping therapy.

The Importance of Incision Depth in Enhancing Cupping Efficacy

Incision depth in cupping practice is a critical factor that significantly influences both the efficacy and safety of the technique. Research shows that incorrect incision depth can lead to medical complications, including intraperitoneal bleeding and infection, although information on this remains limited and further studies are needed in the context of cupping therapy (Lu et al., 2020; AlMusleh & Ansari, 2020). Mistakes in cupping technique can have adverse consequences for patients, as evidenced in systematic reviews and analyses of the practice.

A study by AlMusleh and Ansari affirmed that cupping therapy can be integrated with other treatments without significant side effects if performed correctly, emphasizing the importance of practitioner expertise in determining incision depth (AlMusleh & Ansari, 2020). Inaccurate incision depth can also reduce cupping therapy's effectiveness in achieving its intended therapeutic results. Lu et al. (2020) highlighted the need for proper monitoring and technique application to prevent complications such as internal bleeding. Their findings

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support the notion that exceeding the appropriate depth range in cupping can negate therapeutic benefits and increase adverse effects.

In other cases, such as bullous pemphigoid reported following cupping therapy, risks may arise from poor management of incision depth (Azizpour et al., 2018). This reinforces the consensus among professionals regarding the critical need for precision in cupping practices to ensure both safety and efficacy. Further investigations into the effectiveness and safety of cupping underscore the need for improved practice standards to maximize outcomes and minimize potential harm to patients.

Numerous studies affirm the health benefits of cupping therapy, including reductions in blood pressure and cholesterol. These studies show that, when performed correctly and at appropriate depths, cupping therapy can be highly effective in lowering cholesterol and blood pressure, thereby reducing cardiovascular disease risk (Amiruddin et al., 2022; Helma et al., 2018; Jeni et al., 2023; AlBedah et al., 2019). However, achieving the desired therapeutic effects requires practitioner competence in determining incision depth, which must be carefully considered.

Mechanisms of Cupping Effects and Clinical Implications

The clinical implications derived from this analysis highlight the importance of standardizing incision procedures in cupping therapy to ensure patient safety and therapeutic efficacy. Shallow incisions with a depth of only 0.5 to 1 mm render cupping therapy a minimally invasive intervention rather than a deep surgical procedure. Therefore, comprehensive training for cupping practitioners—including a thorough understanding of skin anatomy and correct incision techniques—is crucial. Al-Musleh and Ansari (2020) noted that adverse effects associated with cupping therapy are rare when performed by well-trained professionals, emphasizing the necessity of rigorous training to minimize complications. Limited practitioner knowledge and a lack of regulation often contribute to misconceptions about the therapy (Al-Yousef et al., 2018; El-Olemy et al., 2017), making competency-based training programs essential for optimizing therapeutic outcomes and preventing adverse events.

Additionally, more extensive research—featuring larger sample sizes and more accurate measurement methods—can contribute to the development of standardized protocols in cupping practice. Albedah et al. (2019) and El-Shanshory et al. (2018) emphasized the importance of structured research to better understand the mechanisms underlying cupping therapy and to support the creation of clearer and more standardized procedural guidelines. Jaouni et al. (2017) and Xing et al. (2020) suggested that further research using larger populations and more precise tools may help evaluate cupping effectiveness in the context of specific medical conditions and strengthen the accuracy of efficacy-related data.

In conclusion, the need for well-measured and standardized cupping protocols reflects a growing awareness of the importance of safe and effective practices that can reduce infection risk and other complications. A systematic research approach is necessary to clarify both the benefits and risks of this therapy and to provide a stronger foundation for clinical recommendations.

Safety Standards in Sunnah Cupping Practice

Safety standards in cupping practice are critical for safeguarding patient health and well-being. Two primary aspects must be addressed: instrument sterilization and proper incision technique, both of which are essential in the implementation of Sunnah cupping.

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The use of sterile instruments is a cornerstone of cupping therapy, especially in wet cupping techniques involving skin incisions. Tools such as cups and cupping scalpels (lancets) must be thoroughly sterilized to prevent infection. Various sterilization methods can be employed, including autoclaving and sterile solution application, with special attention given to the materials used. In general medical practice, the importance of aseptic technique is widely emphasized, particularly since infections such as abscesses can arise from improper sterilization (Usman et al., 2023; Sung et al., 2021; Xu et al., 2023). Research also indicates that proper sterilization techniques significantly reduce infection risks in medical procedures, including acupuncture and cupping therapy (Almaiman, 2018; AlBedah et al., 2019).

Proper incision technique by trained practitioners is also crucial to avoid damaging deeper tissues such as the hypodermis or muscles. Inexperienced individuals or those performing incisions indiscriminately pose a greater risk of infection and other complications. Studies show that patients treated by licensed practitioners experience fewer complications compared to those treated by untrained individuals (Xu et al., 2023; Mohandes et al., 2024). Therefore, a thorough understanding of proper incision techniques and the ability to assess a patient's skin condition are essential aspects of safe and effective cupping practice.

Overall, the implementation of strict safety standards—including instrument sterilization and accurate incision techniques—is vital in reducing infection and complication risks in cupping therapy. The literature also affirms that proper understanding of techniques and procedures is closely associated with better patient outcomes.

4. CONCLUSION

The conclusion drawn from the reviewed article emphasizes the importance of appropriate incision depth in Sunnah cupping practices to ensure safety and enhance therapeutic efficacy. This study indicates that an incision depth between 0.5 mm and 1 mm is sufficient to effectively target the dermal layer—which is rich in blood vessels and sensory nerves—without damaging the deeper hypodermal layer. This approach minimizes the risk of infection and excessive bleeding while simultaneously supporting the release of stagnant blood, which is essential for healing and immune response.

Furthermore, the study highlights the necessity of adequate training and standardized procedures among cupping practitioners to ensure the techniques employed are both safe and effective. Standardization and comprehensive training will facilitate the integration of cupping as a complementary therapy in modern medicine, enhancing patient confidence in its safety and increasing acceptance of cupping as a valid treatment option.

This research also recommends the need for further studies involving larger sample sizes and more precise measurement methods to quantitatively assess the therapeutic impact of cupping and reinforce clinical protocols. Thus, this conclusion paves the way for advancing cupping practice into a safer, standardized, and evidence-based approach, ultimately strengthening its role within contemporary medical care.

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