

DENTAL DISEASE TREATMENT IN THE TIB MANUSCRIPT MSS2515 VIA HALAL MATERIAL USAGE

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ABSTRACT

Dental diseases such as caries, periodontal conditions, and oral infections have historically posed significant health challenges, influencing overall well-being and quality of life. While modern dentistry has advanced substantially, traditional medical texts like the Tib manuscript MSS2515 offer valuable insights into sustainable and ethical treatment approaches. This manuscript is a cornerstone of traditional medicine, documenting various ailments and their treatments with a focus on natural, culturally aligned, and halal-compliant materials. Rooted in Islamic teachings, halal principles emphasize purity, cleanliness, and ethical integrity, making them increasingly relevant in modern healthcare practices, particularly in addressing the ethical and religious concerns of diverse populations. This study investigates the treatments for dental diseases described in the Tib manuscript MSS2515, focusing on halal-compliant materials. It explores the integration of these historical remedies into contemporary dentistry, highlighting their potential for sustainability, biocompatibility, and cultural sensitivity. The research underscores the manuscript's emphasis on ethical considerations and its relevance to modern global healthcare challenges. By analysing the materials and methods documented in the manuscript, the study identifies natural and effective alternatives to conventional dental treatments, such as bone grafts and adhesives, which often face scrutiny for their halal status. The manuscript records treatments for various dental conditions, with the most frequently

addressed being strong teeth (36%), followed by toothache (19%), toothpaste preparation (19%), removing maggots in the tooth (8%), teeth chattering (6%), intermittent toothache (6%), gargling (3%), and cavity treatment (3%). This distribution highlights a predominant emphasis on strengthening teeth and relieving pain, suggesting preventive and therapeutic priorities aligned with halal, sustainable, and culturally sensitive approaches. This multidisciplinary approach bridges the gap between traditional and modern medicine, fostering an inclusive understanding of how historical practices can inform future advancements. Ultimately, the research contributes to a broader dialogue on culturally sensitive and environmentally responsible healthcare solutions, inspiring innovation and inclusivity in dental science.

Keywords: Dental Disease Treatment, Tib Manuscript MSS2515, Halal Materials, Traditional Medicine

1. INTRODUCTION

Dental diseases have been recognized as significant health concerns throughout human history, affecting individuals' overall well-being and quality of life (Sabarudin et al., 2023). Conditions such as dental caries, periodontal diseases, and oral infections are among the most prevalent, impacting populations across all age groups and geographic locations (Osuh et al., 2022).

While modern dentistry offers advanced diagnostic and therapeutic approaches, exploring historical remedies and traditional medical practices provides a valuable perspective on sustainable, ethical, and culturally aligned treatment options. This study delves into the Tib manuscript MSS2515, a historical medical text that offers profound insights into dental disease treatments, particularly emphasizing the use of halal materials.

Originating from the Islamic medical tradition, the manuscript is believed to have been compiled between the late medieval and early modern period, though its precise date and authorship remain subjects of scholarly investigation. Written in classical Arabic with occasional use of Persian and local vernacular terminology, the manuscript reflects the synthesis of Greco-Arabic (Unani), Persian, and local medical knowledge characteristic of Islamic medical literature (Sanni, 2018).

The term "tib" (طب) itself, meaning "medicine" or "healing" in Arabic, indicates the manuscript's overarching focus on health, disease prevention, and treatment. MSS2515 encompasses a wide array of medical subjects, including internal medicine, pharmacology, surgery, and disease-specific therapies. What distinguishes MSS2515 is its practical orientation, offering detailed

descriptions of symptoms, diagnoses, and treatment protocols. These entries are often organized thematically by organ system or disease category, making it a functional manual for practitioners rather than a purely theoretical text (Ibrahim and Syah, 2019).

The Tib manuscript MSS2515 is a critical document within the corpus of traditional medicine (Kamal et al., 2024). Its significance lies in its meticulous documentation of various ailments and their treatments, showcasing the integration of natural resources, ethical considerations, and a holistic approach to healthcare. Written during a time when medicine was deeply intertwined with cultural, spiritual, and environmental factors, the manuscript reflects a rich heritage of medical knowledge.

Among its notable features is the frequent use of materials and methods that align with halal principles, which are the guidelines rooted in Islamic teachings that emphasize purity, cleanliness, and ethical integrity. Building on this foundation, this study investigates the treatments for dental diseases described in the Tib manuscript MSS2515, focusing on halal-compliant materials. It explores the integration of these historical remedies into contemporary dentistry, highlighting their potential for sustainability, biocompatibility, and cultural sensitivity.

2. LITERATURE REVIEW

Halal principles have gained substantial attention in recent years, extending beyond food and beverages to various sectors, including pharmaceuticals, cosmetics, and medical practices. In healthcare, applying halal standards ensures that treatments meet ethical, religious, and safety requirements, particularly for Muslim populations (Rahman et al., 2024; Ramli et al., 2024). This is especially relevant in dental care, where materials such as adhesives, sealants, and medications often involve components derived from animal or synthetic sources (Lutz et al., 2022). By revisiting historical treatments documented in manuscripts like MSS2515, it is possible to identify natural, halal-compliant alternatives that are not only culturally appropriate but also sustainable and biocompatible.

The Tib manuscript MSS2515 offers a unique perspective on the historical use of natural materials in dental treatments. Its emphasis on halal compliance reflects a deeply ingrained understanding of ethical and spiritual considerations in medicine, which remain relevant in today's multicultural and globally connected world (Majeed, 2006). By analyzing the manuscript, this research contributes to a growing body of literature that seeks to integrate

traditional medicine with modern scientific advancements (Yuan et al., 2016). Furthermore, the study addresses a critical need in contemporary dentistry: the development of treatments that are not only effective but also ethically and culturally sensitive. For instance, materials used in dental procedures, such as bone grafts, adhesives, and restorative products, often face scrutiny from patients and practitioners concerned about their halal status (Lestari, 2021). Historical texts like the Tib manuscript MSS2515 provide a valuable resource for identifying alternative materials that align with these requirements, offering practical solutions to ethical dilemmas in dental care.

By situating the Tib manuscript MSS2515 within the context of both historical and modern medicine, this study not only highlights the manuscript's significance but also underscores the enduring relevance of traditional and current knowledge systems. The research invites a multidisciplinary exploration that integrates history, religious studies, material science, and dental medicine, fostering a comprehensive understanding of how past practices can inform future advancements (Ibrahim, 2019).

The relevance of halal-compliant treatments extends beyond Muslim communities, as they often align with broader principles of sustainability, biocompatibility, and environmental responsibility (Shamsudin et al., 2023). Natural ingredients, as prescribed in the Tib manuscript, tend to have fewer side effects and lower environmental impact compared to synthetic counterparts. This position is a halal-based approaches as a promising area of research for addressing global healthcare challenges while respecting cultural and religious diversity (Amin et al., 2024).

This article aims to inspire further research into the intersection of traditional medicine, halal practices, and modern healthcare, ultimately contributing to a more inclusive and ethically informed approach to medical science. By unlocking the potential of manuscripts like MSS2515, researchers and practitioners can uncover innovative solutions that honor the legacy of traditional medicine while addressing the pressing needs of contemporary society.

3. METHODOLOGY

3.1 Manuscript Selection

The manuscript of the Tib manuscript MSS2515 was to identify specific treatments for dental diseases. The manuscript's contents were carefully translated and interpreted according to Mat Piah (2013) and Perdaus et al.

(2021) to extract information regarding dental treatments. Special attention was paid to the materials, herbs, and other natural substances mentioned in the manuscript.

3.2 Data extraction, Classification, and Analysis

Data mining was carried out using the approach with a few modifications (Shafri, 2021). The differences between Shafri (2021) approach were the documentation and data mining included animal and human based materials in addition to data without percentage value. The data that was retrieved about dental and dental-related diseases was organized accordingly. Scientific names and methods for handling were also provided.

4. RESULTS & DISCUSSION

4.1 Tib Manuscript MSS2515 Selection

An analysis of the Tib Manuscript MSS2515 reveals valuable information about historical dental practices and conditions. The bar chart (Figure 1) provides a visual breakdown of the types and prevalence of dental diseases documented in the manuscript, offering insights into the proportional representation of each condition within the text.

Upon examining the Tib manuscript MSS2515, specific treatments for various dental diseases were identified. The manuscript provided detailed descriptions of natural remedies used for these conditions, many of which were based on the use of herbs, resins, oils, and other organic substances. Several treatments focused on the use of antimicrobial and anti-inflammatory materials, which are common in modern dental care.

The manuscript provides a detailed account of traditional dental treatments rooted in natural remedies, with a strong emphasis on plant-based products (Tormizi et al., 2023). The manuscript documents various plants known for their therapeutic properties, including Sega rattan (*Calamus caesus*), Water gourd (*Trichosanthes borneensis*), and many more. These plants were commonly prepared as pastes, powders, or decoctions and applied to address conditions such as toothache, teeth chattering and even to make a stronger tooth. The use of these plant-based remedies underscores the manuscript's reliance on natural, accessible materials that align with the principles of holistic medicine.

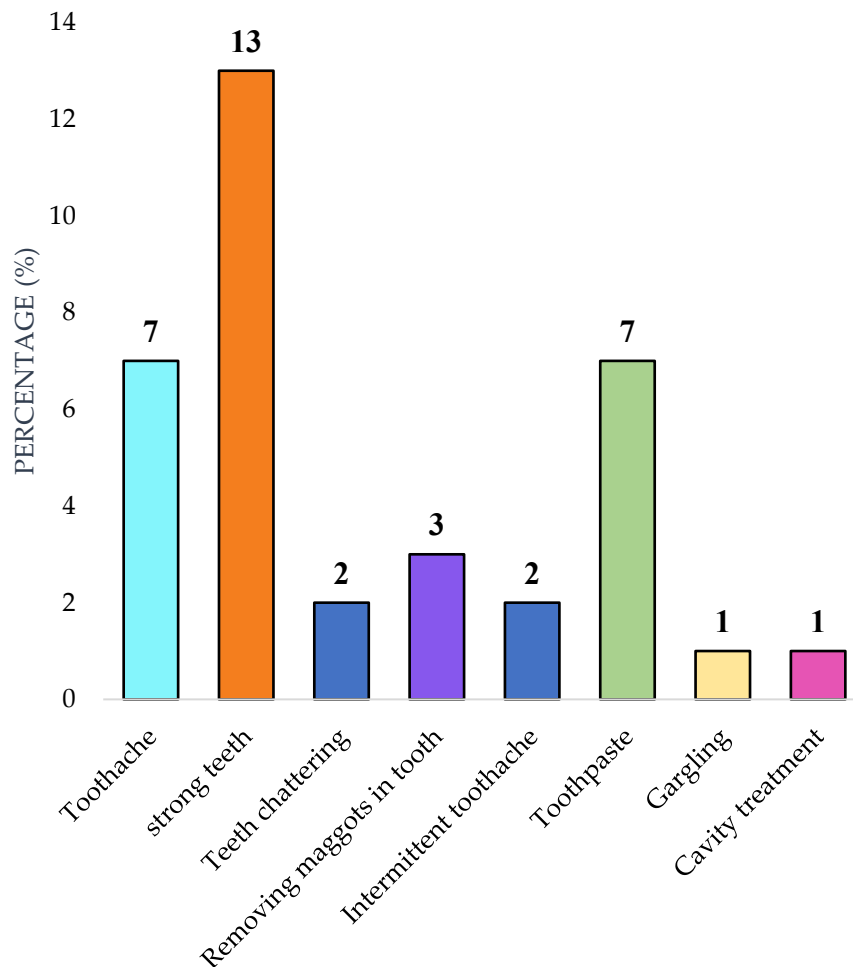


Figure 1. Dental diseases documented in Tib Manuscript MSS2515.

The use of various plants for treating dental diseases, as documented in the Tib Manuscript MSS2515, reflects the manuscript's emphasis on natural, accessible, and effective remedies deeply rooted in traditional medical practices (Mat Piah et al., 2013). These plants were highlighted for their antimicrobial, analgesic, and anti-inflammatory properties, offering solutions to common dental issues (Table 1).

Table 1. Various ingredients in treating dental diseases documented in Tib Manuscript MSS2515

No.	Purpose	Ingredients	
		Common/local name	Species name
183/F001	Toothache/ strong teeth	1. Sega rattan.	1. <i>Calamus caesus</i>
		2. Incense (Kemenyan).	2. <i>Styrax benzoin</i>
185/F004	Toothpaste/Strong teeth	1. Water gourd (Labu Air) balm	1. <i>Trichosanthes borneensis</i>
		2. Giant bamboo.	2. <i>Dendrocalamus asper</i>

		3. Large garlic pear (Kepayang air) root.	3. <i>Crataeva religiosa</i>
185/F008	Strong teeth	1. Palmyra palm/ sea coconut.	1. <i>Borassus flabellifera</i>
		2. Coconut water	2. <i>Cocos nucifera</i>
		1. Macassar kernel	1. <i>Brucea javanica</i>
186/F011	Strong teeth	2. Potash alum	2. Potassium aluminium sulfate
		3. Hairy-fruited eggplant (Indian Night shade) flower	3. <i>solanum lasiocarpum</i>
186/F012	Removing maggots	1. Ballard bush (Pulut-pulut) leaves	1. <i>Urena lobata</i>
		2. Kerakap leaves (Sirih rimau)	2. <i>Piper porphyrophyllum</i>
		3. Siam salt	3. Sodium chloride
186/F013	Intermittent toothache	1. Giant milkweed	1. <i>Calotropis gigantea</i>
		2. Macassar kernel	2. <i>Brucea javanica</i>
186/F015	Toothache	1. Grey nicker seed (Kelubu) root	1. <i>Guilandina nuga</i> L.
		2. Rattleweed	2. <i>Crotalaria retusa</i> L.
		3. Betel leaf (Sirih)	3. <i>Piper betle</i>
		4. Betel nut palm (Pokok pinang)	4. <i>Areca catechu</i>
187/F018	Toothpaste	1. Macassar kernel	1. <i>Brucea javanica</i>
		2. Coconut ember (shell)	2. <i>Cocos nucifera</i>
		3. Tamarind flesh	3. <i>Tamarindus indica</i>
187/F019	Gargling	1. Giant milkweed (Kemengu) leave	1. <i>Calotropis gigantea</i>
		2. Elephant grass	2. <i>Pennisetum purpureum</i>
		3. Water	3. Water
		4. Garlic	4. <i>Allium sativum</i>
187/F020	Toothache	1. Physic Nut (Jarak) leaves and roots	1. <i>Jatropha curcas</i>
		2. Dove milk (Gelang susu) leaves and root	2. <i>Euphorbia thymifolia</i>
188/F024	Toothache	1. Water willow (Urat sugi)	1. <i>Justicia gendarussa</i>
		2. Mullein nightshade leaves	2. <i>Solanum verbascifolium</i>
			3. <i>Gmelina arborea</i>
			4. <i>Citrus hystrix</i>

		3. Beechwood fruit (Gamar)	5. <i>Solanum melongena</i>
		4. Kaffir lime	
		5. Eggplant seeds	
188/F027	Strong teeth	1. Green coconut (Kelapa muda)	1. <i>Cocos nucifera</i>
		2. Salt	2. <i>Sodium chloride</i>
		3. Ginger	3. <i>Zingiber officinale</i>
188/F028	Toothpaste	1. Kaffir lime	1. <i>Citrus hystrix</i>
		2. Water gourd (Labu air)	2. <i>Trichosanthes borneensis</i>
		3. Salt	3. Sodium Chloride
189/F029	Removing the maggots	1. Bur-flower tree leaves	1. <i>Neolamarckia cadamba</i>
		2. Pomegranate leaves	2. <i>Punica granatum</i>

*All scientific name was checked with Malaysian Biodiversity Information System (MyBIS, 2025).

The focus on plant-based remedies not only indicates the natural resources available at the time but also aligns with the principles of Islamic medicine, which values the use of pure, beneficial, and ethically sourced materials (AlRawi et al., 2017). By relying on plants, the treatments adhere to a halal framework, ensuring that they are permissible, non-toxic, and free from contamination by substances prohibited in Islamic teachings.

4.2 Halal Remedies in Tib Manuscript MSS2515

The Tib Manuscript MSS2515 showcases a variety of plant-based remedies used for treating dental diseases, many of which are also deeply integrated into home remedies passed down through generations. These plants, including Grey nicker seed (*Guilandina nuga* L.) root, Rattleweed (*Crotalaria retusa* L.), Betel leaf (Sirih) (*Piper betle*), Betel nut palm (Pokok pinang) (*Areca catechu*), Kaffir lime (*Citrus hystrix*), and Water gourd (Labu Air) (*Trichosanthes borneensis*) and many more (Table 1), have long been recognized for their therapeutic properties, particularly in managing common oral. In traditional home remedies, these plants are often prepared in simple, natural forms such as pastes, mouth rinses, or decoctions, offering accessible and effective solutions for individuals without access to modern dental care.

Most of these plants are used in home remedies for their analgesic and anti-inflammatory effects, helping to relieve toothaches, reduce swelling in gums, treat infections and inflammation, and have potent antimicrobial properties. These plants, all parts of natural home treatments, provide a holistic and non-

invasive approach to maintaining oral health (Refaey et al., 2024).

From a halal perspective, using these plants in home remedies aligns with Islamic medical ethics. Halal refers to what is permissible under Islamic law (Nurdalila et al., 2024), and in the context of medicine, this extends to the materials and substances used in treatment. Plants are inherently halal because they are natural and free from impurities or prohibited substances such as alcohol, non-halal animal derivatives, or harmful additives (Herdiana et al., 2023).

The plant-based remedies in MSS2515 not only offer effective solutions for dental issues but also conform to Islamic dietary and ethical standards, ensuring they are permissible for use (Sabarudin et al., 2023). By focusing on natural, halal remedies, the manuscript emphasizes the importance of using pure, safe, and ethical treatments, reinforcing the holistic approach to health that integrates both spiritual and physical well-being. These home remedies reflect a deep understanding of the connection between nature, culture, and religion, offering valuable insights for modern practitioners seeking to integrate traditional, halal-compliant treatments into contemporary healthcare practices (Jamaludin et al., 2024).

5. CONCLUSION

The Tib Manuscript MSS2515 offers a rich repository of traditional dental care practices, revealing a deep understanding of the therapeutic properties of plant-based remedies. The manuscript highlights the use of various natural substances which were utilized to treat common dental conditions like toothaches, gum inflammation, and tooth strengthening. These treatments emphasize the holistic approach of utilizing antimicrobial, anti-inflammatory, and analgesic plants that align with medical effectiveness and ethical standards. The focus on plant-based remedies also ensures adherence to halal principles, guaranteeing that these treatments are pure, permissible, and free from harmful substances.

By combining traditional knowledge with ethical considerations, the Tib Manuscript MSS2515 underscores the importance of using natural, safe, and effective remedies that respect both cultural and religious values. The integration of these plant-based treatments into home remedies shows their accessibility and practical application, offering valuable solutions for maintaining oral health. The manuscript not only provides insight into the historical dental practices of the time but also offers a framework for modern practitioners interested in incorporating halal, plant-based treatments into

contemporary healthcare. This connection between nature, culture, and religion highlights the enduring relevance of traditional knowledge in addressing modern health challenges.

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