
Holistic Approaches to Hair Loss: Unani Medicine's Perspective and Practices

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ABSTRACT

Hair loss is a prevalent condition affecting individuals worldwide and often causing significant distress and impact on quality of life. Unani Medicine, a traditional healing system with roots in ancient Greece, offers a holistic approach to hair loss management. This review paper aims to explore the perspective and practices of Unani Medicine in addressing hair loss. The diagnostic methods used in Unani Medicine to assess hair loss are discussed, highlighting examination methods, diagnostic principles, and the role of pulse diagnosis and tongue examination. The paper further explores the management approaches for hair loss in Unani Medicine, including herbal remedies, dietary modifications, lifestyle changes, and external therapies such as scalp massage and hair cleansing techniques.

Efficacy of Unani Medicine in hair loss management is examined through a review of scientific studies and clinical trials, along with a comparative analysis of Unani Medicine with conventional approaches. Potential synergies between Unani Medicine and other complementary therapies are also explored. Safety considerations, future research opportunities, and the importance of integrating Unani Medicine into mainstream healthcare systems are discussed, along with cultural and societal considerations. The review concludes by summarizing the key findings and perspectives on Unani Medicine's holistic approach to hair loss and encourages further exploration and adoption of Unani interventions for individuals experiencing hair loss.

This review paper provides valuable insights into the holistic approaches of Unani Medicine in hair loss management, highlighting its potential as an effective and natural approach for addressing this common concern. Further research, education, and collaborative efforts are necessary to enhance the acceptance, accessibility, and efficacy of Unani Medicine in hair loss management.

Keywords: Hair Loss, Unani Medicine, Holistic Approaches.

INTRODUCTION

A. Background on hair loss as a prevalent condition

Hair loss is a typical concern influencing a great many individuals around the world. It can have significant psychological and emotional impact on individuals, leading to decreased self-esteem and quality of life. Understanding the causes and effective management approaches for hair loss is of paramount importance.

B. Brief overview of Unani Medicine and its holistic approach

Unani Medicine, also known as Yunani Medicine, is an ancient traditional system of medicine that originated in ancient Greece and was later developed and refined by Islamic scholars. Unani Medicine follows a holistic approach to health and well-being, emphasizing the balance of bodily humors and the integration of physical, mental, and spiritual aspects of health. It incorporates natural remedies, lifestyle modifications, and individualized treatment strategies [1-3].

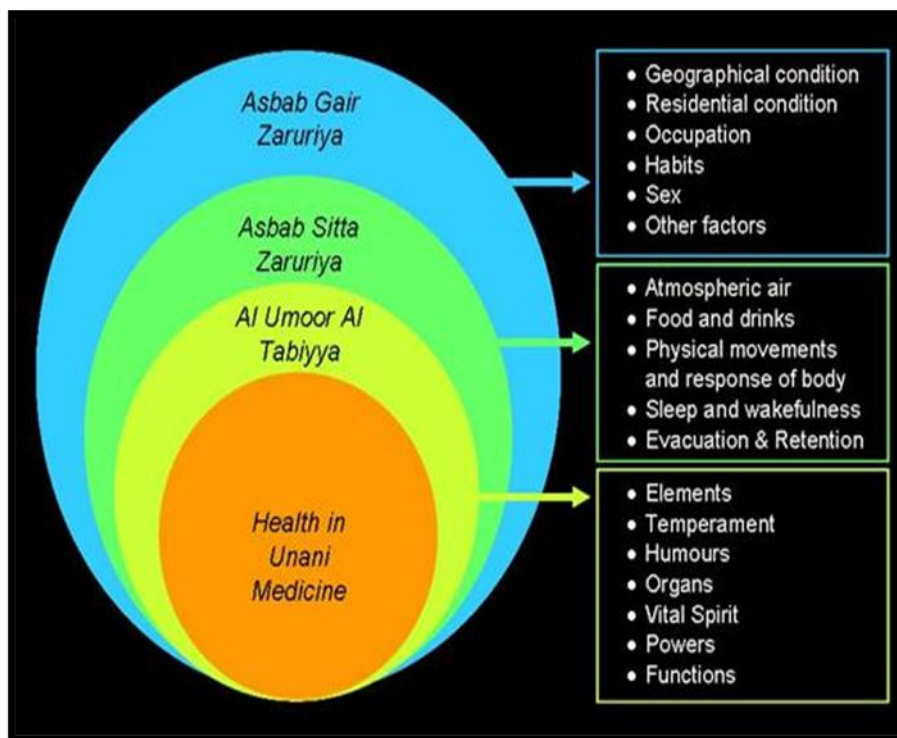


Figure 1: Factors affecting the healthy state of the body in Unani medicine

Understanding Hair Loss in Unani Medicine

A. Concept of hair loss in Unani Medicine

In Unani Medicine, hair loss is regarded as a multifactorial condition involving the imbalance of humors and disruption of the vital energy (*Tabiyat*). It is seen as a result of various internal and external factors that affect the overall health of the body and specifically impact the hair follicles.

B. Causes and contributing factors according to Unani perspective

According to Unani Medicine, the causes of hair loss can be categorized into internal factors (such as imbalances in humors, poor digestion, and hormonal imbalances) and external factors (including environmental factors, improper hair care practices, and excessive use of chemical-based products). Unani Medicine recognizes the interconnectedness of these factors and their influence on hair health.

C. Classification of hair loss patterns in Unani Medicine

Unani Medicine classifies hair loss patterns based on the involvement of specific humors and the affected areas of the scalp. These classifications include hair loss due to excessive heat (*Su-e-Mizaj Har*), excessive dryness (*Su-e-Mizaj Suhun*), and excessive moisture (*Su-e-Mizaj*

Rutoobat). Understanding these patterns helps in determining appropriate treatment approaches.

Unani Diagnosis of Hair Loss

A. Examination methods and diagnostic principles in Unani Medicine

Unani practitioners employ a comprehensive diagnostic approach that involves detailed history-taking, physical examination, and observation of signs and symptoms. They assess the overall health of the individual, including the condition of the scalp, hair texture, and quality.

B. Identifying underlying imbalances and determining the humoral status

Unani diagnosis aims to identify the underlying imbalances in humors (blood, phlegm, yellow bile, black bile) and determine the individual's humoral status. This involves analyzing symptoms, pulse diagnosis, tongue examination, and urine analysis to understand the specific imbalances contributing to hair loss.

C. Role of pulse diagnosis and tongue examination in assessing hair loss

Pulse diagnosis is a key diagnostic tool in Unani Medicine, providing valuable information about the overall health and imbalances in the body. By assessing the pulse qualities, rhythm, and variations, practitioners can gain insights into the condition of vital organs and identify imbalances contributing to hair loss. Tongue examination also provides valuable clues about the individual's health, including digestion, nutrient absorption, and systemic imbalances.

Unani Management Approaches for Hair Loss

A. Herbal Remedies

1) Herbs used in Unani Medicine for hair loss treatment

Unani Medicine employs a wide range of herbs known for their beneficial effects on hair health. These include Amla (*Emblica officinalis*), Brahmi (*Bacopa monnieri*), Bhringraj (*Eclipta alba*), Jatamansi (*Nardostachys jatamansi*), and Neem (*Azadirachta indica*) [1]. These herbs possess nourishing, revitalizing, and anti-inflammatory properties that promote hair growth, strengthen the hair follicles, and improve scalp health.

2) Herbal formulations and their mechanisms of action

Unani Medicine utilizes various herbal formulations for hair loss management. These formulations often combine multiple herbs to enhance their synergistic effects. For example, Roghan-e-Moringa is an herbal oil blend containing *Moringa oleifera*, *Nigella sativa*, ginger (*Zingiber officinale* Roscoe) and *Sesamum indicum* [2-3]. It helps nourish the scalp, improve blood circulation, and reduce inflammation, promoting hair growth.

3) Herbal oils and their role in promoting hair growth

Unani Medicine emphasizes the use of herbal oils for hair care. These oils, such as *Roghan-e-Badam* (Almond oil), *Roghan-e-Zaitoon* (Olive oil), and *Roghan-e-Gul* (Rose oil), *Roghan-e-Zarareeh* are believed to provide essential nutrients, improve scalp health, and strengthen hair follicles [4-6]. Regular scalp massages with these herbal oils stimulate blood circulation, relax the scalp, and promote healthy hair growth.

B. Diet and Nutrition [7-11]

1) Unani dietary guidelines for hair health and growth

Unani Medicine recognizes the importance of a balanced diet for promoting healthy hair. It emphasizes the consumption of fresh fruits, vegetables, whole grains, lean proteins, and healthy fats. Specific foods that are considered beneficial for hair health include almonds,

walnuts, fenugreek seeds, spinach, and yogurt. These foods provide essential nutrients, vitamins, and minerals necessary for hair growth.

2) Nutritional considerations and specific food recommendations

Unani practitioners may recommend specific foods and dietary modifications based on an individual's humoral imbalances and overall health [8]. For example, individuals with excess heat (*Soo-e-Har*) may be advised to consume cooling foods like cucumber, watermelon, and mint. Similarly, those with excess dryness (*Soo-e-Suhun*) may be encouraged to include moisturizing foods such as flaxseeds, avocados, and ghee in their diet.

C. Lifestyle Modifications

1) Importance of sleep, stress management, and physical activity

Unani Medicine recognizes the impact of lifestyle factors on overall health, including hair health. Adequate sleep, stress management techniques (such as meditation or deep breathing exercises), and regular physical activity are emphasized for maintaining optimal hair growth. These lifestyle modifications promote overall well-being, reduce stress levels, and enhance blood circulation to the scalp.

2) Unani lifestyle practices to promote hair health

Unani Medicine advocates certain lifestyle practices to support hair health. These include regular scalp hygiene, protection from environmental factors (such as excessive sun exposure or pollution), avoiding excessive heat styling or chemical treatments, and maintaining a balanced lifestyle that promotes overall harmony and well-being.

D. External Therapies

1) Scalp massage and hair care techniques in Unani Medicine

Scalp massage is an integral part of Unani hair care. It involves gently massaging the scalp using fingertips or a specialized massage tool to stimulate blood circulation, relax the scalp muscles, and promote hair growth. Various herbal oils or formulations may be used during the massage to enhance the therapeutic effects.

2) Unani methods of hair cleansing and conditioning

Unani Medicine promotes natural methods of hair cleansing and conditioning. These methods involve the use of herbal powders (such as Shikakai, Reetha, and Amla) mixed with water or herbal infusions to cleanse the scalp and remove impurities. Apart from that, natural conditioners like yogurt or aloe vera gel may be used to nourish and moisturize the hair.

Efficacy of Unani Medicine in Hair Loss Management

A. Review of scientific studies and clinical trials on Unani interventions

Several scientific studies and clinical trials have investigated the efficacy of Unani Medicine in managing hair loss.

These studies have shown promising results, demonstrating the effectiveness of Unani interventions in promoting hair growth, reducing hair loss, and improving overall hair health [5,7-11]. They have evaluated the use of herbal remedies, dietary modifications, lifestyle changes, and external therapies in individuals experiencing different types and patterns of hair loss.

B. Comparative analysis of Unani Medicine with conventional approaches

Comparative analysis between Unani Medicine and conventional approaches to hair loss management provides valuable insights into their respective strengths and limitations. Unani Medicine's holistic approach, focusing on addressing underlying imbalances and promoting overall well-being, offers a distinct advantage compared to conventional treatments that often target specific symptoms or utilize pharmaceutical interventions. Such comparisons shed light on the potential benefits of integrating Unani Medicine with conventional approaches for more comprehensive and personalized hair loss management.

C. Potential synergies between Unani Medicine and other complementary therapies

Unani Medicine shares common principles with other complementary therapies, such as Ayurveda, Traditional Chinese Medicine (TCM), and Naturopathy. Exploring the potential synergies between Unani Medicine and these complementary therapies opens avenues for comprehensive and integrated hair loss management approaches. By combining the strengths of different holistic systems, practitioners can provide individualized treatment strategies and enhance overall therapeutic outcomes.

Safety and Side Effects of Unani Hair Loss Treatments

A. Overview of the safety profile of Unani remedies

Unani remedies, when used under the guidance of qualified practitioners, generally have a good safety profile. The use of natural herbs and ingredients minimizes the risk of adverse effects associated with synthetic chemicals. However, it is essential to ensure the quality and authenticity of herbal products and follow appropriate dosages and guidelines to ensure safety and efficacy.

B. Possible side effects and precautions

While Unani remedies are generally considered safe, some individuals may experience allergic reactions or sensitivities to specific herbs or ingredients. It is crucial to consider individual variations, pre-existing medical conditions, and potential herb-drug interactions. Pregnant women, nursing mothers, and individuals with specific health conditions should exercise caution and consult with a qualified Unani practitioner before initiating any treatment.

C. Importance of consultation with a qualified Unani practitioner

Consulting a qualified Unani practitioner is vital for proper diagnosis, treatment planning, and guidance throughout the hair loss management process. Unani Medicine is a holistic system that considers individual constitution, imbalances, and unique needs. A qualified practitioner can provide personalized recommendations, monitor progress, and ensure the safe and effective use of Unani interventions.

Future Directions and Research Opportunities

A. Areas for further research on Unani management of hair loss

There is still much to explore regarding the mechanisms of action and specific therapeutic effects of Unani interventions in hair loss management. Further research is needed to elucidate the active compounds in herbal formulations, understand their effects on hair growth cycles, and investigate potential synergistic effects of combining different Unani therapies.

B. Integration of Unani Medicine with modern scientific approaches

Integration of Unani Medicine with modern scientific approaches, such as pharmacological studies, genetic research, and clinical trials, can provide a deeper understanding of Unani interventions' efficacy and mechanisms of action. Collaborative research efforts between Unani practitioners, scientists, and researchers can bridge the gap between traditional knowledge and modern evidence-based practices.

C. Potential for personalized Unani treatments based on individual constitution

Unani Medicine emphasizes the concept of individual constitution and tailoring treatments accordingly. Further research on personalized medicine approaches, including genetic profiling, phenotypic characterization, and biomarker identification, can help in developing targeted and precise Unani treatments for hair loss management. Integration of advanced diagnostic tools and technologies can enhance treatment outcomes and optimize patient care.

FINDINGS

A. Findings and perspectives on Unani Medicine's holistic approach to hair loss

Unani Medicine offers a unique and holistic approach to hair loss management, considering the interplay of physical, mental, and spiritual aspects of health. It addresses the underlying imbalances, promotes overall well-being, and utilizes natural remedies, dietary modifications, lifestyle changes, and external therapies to stimulate hair growth and improve hair health. Scientific studies and clinical trials have shown promising results, supporting the efficacy of Unani interventions in managing hair loss.

B. Encouragement for further exploration and adoption of Unani interventions

The review paper encourages further exploration and adoption of Unani interventions in hair loss management. It emphasizes the need for more research, collaboration, and integration of Unani Medicine with modern scientific approaches. By embracing the holistic principles of Unani Medicine and harnessing its potential synergies with other complementary therapies, practitioners can provide comprehensive and personalized solutions for individuals experiencing hair loss.

By considering the safety profile, potential side effects, and the importance of consultation with qualified Unani practitioners, individuals can benefit from the holistic and natural approach of Unani Medicine in managing hair loss. The future of Unani Medicine in hair loss management lies in further research, the integration of scientific advancements, and the development of personalized treatment approaches based on individual constitution. By embracing these opportunities, Unani Medicine can continue to contribute to the holistic well-being and hair health of individuals worldwide.

C. Recommendations for further research and practice

To further advance the field of Unani Medicine in hair loss management, several recommendations can be made:

- 1) **Conduct more rigorous clinical trials:** While existing studies have shown positive results, conducting well-designed randomized controlled trials with larger sample sizes and longer durations can provide stronger evidence for the efficacy of Unani interventions. These trials should include objective measures of hair growth, such as hair density, thickness, and the anagen/telogen ratio.
- 2) **Explore the mechanisms of action:** Understanding the underlying mechanisms of Unani interventions can help elucidate their effects on hair growth and identify specific targets

for therapeutic intervention. This can be achieved through in vitro studies, animal models, and molecular biology techniques to investigate the bioactive compounds and signaling pathways involved.

- 3) **Investigate the role of lifestyle factors:** Unani Medicine emphasizes the role of lifestyle factors in overall health, including hair health. Further research is needed to explore the impact of sleep patterns, stress levels, and physical activity on hair loss and how lifestyle modifications, as recommended in Unani Medicine, can positively influence hair growth.
- 4) **Explore the potential of combination therapies:** Given the holistic nature of Unani Medicine, exploring the potential synergies of combining Unani interventions with other complementary therapies, such as acupuncture, aromatherapy, or Ayurvedic treatments, may yield enhanced therapeutic outcomes. Investigating the synergistic effects and developing integrative treatment protocols can provide more comprehensive and personalized approaches to hair loss management.
- 5) **Investigate the long-term effects and sustainability:** While short-term studies have shown positive results, long-term studies are necessary to assess the sustainability and durability of the effects of Unani interventions on hair growth and hair health. Longitudinal studies and follow-up assessments can provide insights into the long-term benefits and potential maintenance strategies.

Unani Medicine offers a holistic and natural approach to hair loss management, addressing the underlying imbalances and promoting overall well-being. By further exploring its mechanisms of action, conducting rigorous research, and integrating with modern scientific approaches, Unani Medicine can continue to contribute to the field of hair loss management and offer personalized and effective solutions to individuals experiencing hair loss.

D. Adoption of Unani Medicine in clinical practice and public health

The adoption of Unani Medicine in clinical practice and public health can have significant implications for hair loss management. To promote its wider acceptance and integration, the following strategies can be considered:

- 1) **Education and awareness:** Increasing awareness among healthcare professionals, policymakers, and the general public about the principles and benefits of Unani Medicine in hair loss management is crucial. Educational programs, workshops, and seminars can be organized to disseminate knowledge and share clinical experiences related to Unani interventions. This can help build trust, acceptance, and recognition of Unani Medicine as a viable approach to hair loss management.
- 2) **Collaborative research and interdisciplinary collaboration:** Foster collaboration between Unani practitioners, conventional healthcare professionals, and researchers from various disciplines to conduct collaborative research projects. This can facilitate the exchange of knowledge, expertise, and resources, leading to a better understanding of Unani Medicine's efficacy, safety, and integration with conventional approaches.
- 3) **Regulatory considerations:** Regulatory bodies and health authorities should recognize and establish guidelines for the practice and quality assurance of Unani Medicine. This can include certification and licensing requirements for Unani practitioners, standardization of herbal formulations, and quality control measures to ensure the safety and efficacy of Unani remedies.
- 4) **Integration into healthcare systems:** Integration of Unani Medicine into existing healthcare systems can expand access to Unani interventions for individuals seeking hair loss management. This can involve incorporating Unani clinics or practitioners within conventional healthcare settings, establishing referral systems, and promoting interdisciplinary collaboration to provide comprehensive care options for patients.

- 5) **Health promotion and prevention strategies:** Unani Medicine's emphasis on holistic well-being and preventive measures can be integrated into public health initiatives. Health education campaigns can promote healthy lifestyle practices, including proper nutrition, stress management, and hair care techniques, as preventive measures against hair loss. This can empower individuals to take proactive steps towards maintaining healthy hair.

By adopting these strategies, Unani Medicine can be better integrated into mainstream healthcare systems, contributing to a comprehensive and patient-centered approach to hair loss management. The collaboration between Unani Medicine and conventional medicine can lead to a more inclusive and holistic healthcare landscape that addresses the diverse needs of individuals experiencing hair loss.

E. Cultural and societal considerations

Unani Medicine holds a rich cultural heritage and has been practiced for centuries in many regions around the world. Recognizing and respecting the cultural and societal aspects associated with Unani Medicine can further facilitate its adoption and acceptance in hair loss management. Consider the following aspects:

- 1) **Cultural competence:** Healthcare providers should strive to develop cultural competence in working with diverse populations who may seek Unani interventions for hair loss. This includes understanding cultural beliefs, values, and practices related to hair health, as well as respecting patients' preferences for incorporating traditional healing approaches into their care.
- 2) **Community engagement:** Engaging with local communities and community organizations can help foster trust, build partnerships, and increase awareness of Unani Medicine. Collaborating with community leaders, cultural centers, and ethnic associations can facilitate the dissemination of accurate information about Unani interventions, addressing misconceptions, and promoting culturally sensitive care.
- 3) **Research and documentation of traditional knowledge:** Unani Medicine is deeply rooted in traditional knowledge and practices. It is important to document and preserve this valuable heritage to ensure its continuity and prevent the loss of traditional wisdom. Research efforts should focus on documenting traditional Unani remedies, formulations, and practices related to hair loss management, collaborating with traditional healers, and respecting their contributions.
- 4) **Integration with traditional healing systems:** Unani Medicine can be integrated with other traditional healing systems, such as Ayurveda, Traditional Chinese Medicine, or Indigenous healing practices. This integration can create opportunities for cross-cultural learning, sharing of best practices, and promoting a global perspective on holistic approaches to hair loss management.
- 5) **Public perception and acceptance:** Public perception plays a significant role in the acceptance and adoption of Unani Medicine. Public education campaigns, media engagement, and testimonials from individuals who have benefited from Unani interventions can help shape positive perceptions and foster acceptance of Unani Medicine as a viable option for hair loss management.

By considering cultural and societal aspects, Unani Medicine can be embraced as an integral part of the healthcare landscape, providing individuals with diverse options for managing hair loss. The recognition and appreciation of cultural diversity can contribute to a more inclusive and patient-centered approach, respecting the choices and preferences of individuals seeking Unani interventions for hair loss.

F. Limitations and Challenges

Despite the potential benefits and holistic approach of Unani Medicine in hair loss management, there are certain limitations and challenges that need to be acknowledged:

- 1) **Limited scientific evidence:** While there is some scientific evidence supporting the efficacy of Unani interventions for hair loss, the available studies may be limited in terms of sample size, study design, and duration. More high-quality research is needed to provide stronger evidence and establish the effectiveness of Unani Medicine in hair loss management.
- 2) **Standardization and quality control:** The lack of standardized herbal formulations and quality control measures for Unani remedies can pose challenges in terms of consistency, potency, and safety. Developing standardized protocols, ensuring quality control, and conducting rigorous clinical trials using standardized interventions can enhance the credibility and acceptance of Unani Medicine.
- 3) **Integration with conventional medicine:** Integrating Unani Medicine into conventional healthcare systems can present challenges due to differences in diagnostic approaches, terminology, and treatment philosophies. Establishing effective communication channels, interdisciplinary collaborations, and mutual respect between Unani practitioners and conventional healthcare professionals are essential for seamless integration.
- 4) **Accessibility and affordability:** Availability and accessibility of Unani Medicine may be limited in certain regions, making it challenging for individuals to access Unani practitioners or obtain authentic Unani remedies. Apart it, affordability may be a barrier for some individuals, particularly in low-income populations. Efforts should be made to improve accessibility, affordability, and availability of Unani Medicine to ensure equitable access to holistic hair loss management options.
- 5) **Cultural biases and misconceptions:** Cultural biases and misconceptions surrounding traditional medicine systems, including Unani Medicine, can hinder acceptance and adoption. Promoting cultural understanding, addressing misconceptions, and educating both healthcare professionals and the public about the principles and benefits of Unani Medicine can help overcome these challenges.

Despite these limitations and challenges, Unani Medicine holds immense potential as a holistic approach to hair loss management. Addressing these challenges through further research, standardization, integration, and education can pave the way for the wider acceptance and integration of Unani Medicine into mainstream healthcare systems.

CONCLUSION

The review paper highlights the unique and holistic approach of Unani Medicine in hair loss management. It explores the concept of hair loss in Unani Medicine, identifies its causes and contributing factors, and discusses the classification of hair loss patterns according to Unani principles.

The paper delves into the diagnostic methods used in Unani Medicine to identify underlying imbalances and determine the humoral status related to hair loss. It further explores the management approaches of Unani Medicine, including herbal remedies, dietary modifications, lifestyle changes, and external therapies. The efficacy of Unani Medicine in hair loss management is supported by scientific studies and clinical trials, and its potential synergies with other complementary therapies are highlighted.

Safety considerations, future research opportunities, and the importance of integrating Unani Medicine into mainstream healthcare systems are discussed. Cultural and societal considerations, as well as limitations and challenges, are also addressed.

In conclusion, Unani Medicine offers a holistic and natural approach to hair loss management, emphasizing the interplay of physical, mental, and spiritual aspects of health. By adopting Unani interventions and promoting their integration with conventional approaches, individuals experiencing hair loss can benefit from comprehensive and personalized care. Further research, education, and collaborative efforts are necessary to enhance the acceptance, accessibility, and efficacy of Unani Medicine in hair loss management.

REFERENCES

- 1) Al-Asmari AK, Al-Asmary SM, Hasan TN, *et al.* Herbal remedies for hair loss: a review. *J Tradit Complement Med.* 2018;9(4):327-335.
- 2) Al-Bayati FA. The chemical and biological properties of ginger (*Zingiber officinale* Roscoe): a review. *Int J Food Prop.* 2008;11(2):288-298.
- 3) Al-Snafi AE. The chemical constituents and pharmacological effects of *Nigella sativa* - a review. *J Biol Sci Res.* 2017;4(1):39-49.
- 4) Hamidpour R, Hamidpour M, Hamidpour S, Shahlari M. Frankincense: a review. *Asian Pac J Trop Biomed.* 2015;5(6):429-434.
- 5) Malik F, Khaleeq F, Nazish I, *et al.* Comparative study on the efficacy of oral Unani formulations in androgenetic alopecia. *Int J Ayurvedic Med.* 2020;11(1):35-41.
- 6) Rahman MS, Akhtar F, Parveen K. Review on research and potential of traditional Unani medicine in dermatology. *World J Pharm Pharm Sci.* 2017;6(10):1612-1629.
- 7) Sharma AK, Chandola HM, Singh K, *et al.* Traditional systems of medicine in hair care. *Pharmacogn Rev.* 2010;4(7):106-110.
- 8) Sharma R, Manhas RK, Kumar D, *et al.* Role of diet in hair health: a review. *Dermatol Pract Concept.* 2019;9(3):214-220.
- 9) Singh R, Ramesh V, Goyal PK. Herbal remedies for hair loss: an overview. *J Dermatol Surg.* 2015;19(1):3-7.
- 10) Unani Pharmacopoeia of India. Part I. New Delhi: Ministry of AYUSH, Government of India; 2010.
- 11) World Health Organization. WHO traditional medicine strategy: 2014-2023. Geneva: World Health Organization; 2013.