



IJPPR

INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals

ISSN 2349-7203



Human Journals

Review Article

November 2021 Vol.:22, Issue:4

© All rights are reserved by Mohammed Khalid Zaki et al.

Asl (Honey) An Important Nutraceutical, of Traditional Unani Medicine: A Review in The Context with Clinical Research



Mohammed Khalid Zaki^{1*}, Qamar Uddin², Ahsan Farooqui³, Ahmed Minhajuddin⁴, Faiza khatoon¹, Abdul Munim¹, Arshad Qureshi⁵, Mohd. Asad⁵

¹MD Scholar, Department of Moalajat (Medicine), National Research Institute of Unani Medicine for Skin Disorders (NRIUMSD), Hyderabad-500038, India.

²Professor & Head, Department of Moalajat (Medicine) National Research Institute of Unani Medicine for Skin Disorders (NRIUMSD), Hyderabad-500038, India

³Professor & Head, Department of Moalajat (Medicine) Govt Nizamiya Tibbi College (GNTC) Charminar, Hyderabad-500038, India

⁴Deputy-Director (Incharge), National Research Institute of Unani Medicine for Skin Disorders (NRIUMSD), Hyderabad-500038, India

⁵MD Scholar, Department of Ilmul Advia (Pharmacology), National Research Institute of Unani Medicine for Skin Disorders (NRIUMSD), Hyderabad-500038, India

Submitted: 24 October 2021

Accepted: 30 October 2021

Published: 30 November 2021

Keywords: Asl, Diaper Dermatitis, Eczema, Wound healing, Unani Medicine

ABSTRACT

This review paper aims to explain the morphology, nutritional benefits, ethnomedicinal, pharmacological actions, and therapeutic uses of Asl (Honey). Thus, it will provide significant opportunities for future research to explore its Nutraceutical potential and develop better medicine for Eczema, Diaper Dermatitis, Psoriasis, and Burn. We reviewed the published literature on Asl (Honey) using bibliographic databases such as PubMed, Google Scholar, Science Direct, and web of science, and Unani Classical literature books such as *Ibn Baitr*, *Al Jamai-ul-Mufradt al Advia wal Aghzia*, *Najmulghani AH. Khazain-ul-advia*, *Ibn Rushd kitab ul kulliya*, *Ibn Rushd kitab ul kulliya*, *Ibn Rushd kitab ul kulliya*, *Ibn Rushd* Since ancient times, t. Asl (Honey) has been administered as an appetizer, aphrodisiac, cicatrizant, anthelmintic, anti-inflammatory, analgesic, Nutrient, deobstruent, lithotriptic, tonic for the stomach, and antiseptic, most often by practitioners of traditional Unani medicine. Asl and its formulations, according to Unani medicine, can help treat Eczema, Diaper Dermatitis, Psoriasis, Burn, and other skin disorders. Some clinical research also highlights the possibility of such an effect, e.g., Honey is a natural anti-angiogenic and anti-inflammatory agent, corneal scratching caused by surgery and exotoxin-induced inflammation of the cornea when applied topically. Albeit more detailed study is necessary to back up these sayings.



HUMAN JOURNALS

www.ijppr.humanjournals.com

INTRODUCTION:

Asl (Honey) has a specific colour, flavour, aroma, and thick consistency; the nectar of flowers produces it. Honey bees of various types produce Asl (Honey) like *Apis mellifera*, *Apis data*, *Apis indica*, etc. Unani physicians have used asl (Honey) since antiquity. It is used as medicine for various diseases and used in various formulations for preservation and nutrition purposes. ^[1]

Honey contains 95% carbohydrates and other substances like amino acids, proteins, minerals, polyphenol, vitamins and aromatic substances. ^[2]

Prophet Mohammad (PBUH) recommended Asl Khalis (Honey) as antidiarrheal and desiccant (wound healing).^[3]

Honey contains various substances like glucose, maltose, fructose, trisaccharide, water, and other carbohydrates such as sucrose, vitamins, proteins, mineral, yeast, enzymes, and other Microorganisms and organic acids in a small number of organic acids. Honey contains a high level of tetracycline, phenolic compounds, hydrogen peroxide, due to which it acts as an antimicrobial agent.^[4]

MATERIALS AND METHODS:

A review of literature on Asl (Honey) was undertaken using the bibliographic database viz. Pub Med, Google Scholar, Science Direct and science web, and Unani Classical literature books, Ibn Baitār ZAAAA. Al Jamai-ul-Mufradāt al Advia wal Aghzia, Najmulghani AH. Khazain-ul-advia, Ibn Rushd kitab ul kulliyat. The search was conducted using the terms Asl, Honey, As Nutrient, and therapeutic agent.

VERNACULAR NAMES:

Asl (Honey) is called Asal, or Asl – un Nahal in Arabic: ^[5,6,7] in Persian it is known as– Shehdaan, or Angbeen.^[5,6,7] in Unani the Honey is better known as Mali, or Alkaulees or Anjabin^[8] Punjabi name of Honey is saht. In Gujrati, its name is Madh. ^[5] It is called Madhu is in Sanskrit and miel in Latin. ^[5] Madda, Pehap Ras are named in hindi language. In Bengali, it is better known as Madhu or madh and in Marathi, it is called Madh. The Urdu language is known as shahad, and in Turkish known as desa and taenu in Telugu. In English, Honey and siryani as Bal.



Fig 1: Honey (Asl)

Physicochemical properties:

Appearance:

Thick liquid of, syrupy base with a yellowish-brown or light yellowish color (anonymous 1988)^[9] fig.1

Taste and odor:

Sweet and specific odor.^[9,6]



Descoridus describes that best Asl (Honey) is fragmatic, very sweet, tasty, and red.^[8]

Specific gravity: 1.37 – 1.4 ^[8]

Proteins 0.3% Water: 20.6 %^[9] Carbohydrate: 79.5 %^[9]

Calcium: 5.0 % Minerals 0.2% phosphorus: 16 % ^[9] Energy: 319 kcal /100gm^[9] Ash: 0.5 %^[9]

Mizaj (Temperament):

Hot and wet 1st degree. ^[10]

Fresh Honey: Har(Hot) 1st-degree yabis (Dry)2nd degree.^[6]

Few days old: Har yabis(Hot and Dry) 2nd degree. ^{11,6,8}

Few years old: Har (Hot) 3rd-degree Yabis (Dry)2nd degree. ^[6]

Muzir (Harmful Effects):

For hot and bilious temperament peoples.^[6]

Headache, Vomiting, and Thirst.^{10, [6]}

Musleh (Correctives): Vinegar, aab anar tursh(punica grantum juice), lemon juice(citrus aurantifolia), coriander(coriandrum sativum).^{10, [6]}

Turanj(citrus medica).^[6]

Substitutes (Badal):

Doshab Angoori (juice of vitis vinifera), Ripened dates. Jaggery syrup.^[10, 6]

Nafa Khas: (Main Actions):

Mukhrij balgham (excretes balgham) (useful in most of the cold diseases and phlegmatic temperament persons)^[10, 6]

Miqdar khurak (Dosage): 2 to 5 tolas (20 -50 gms),^[10,6]

Compound Formulations: (Murakkabāt):

Qiwam (Basic Solution of Particular consistency) for Majun, Itrifal, Laooq, Laboob, Mufarrehat, and Tiryaaqat(all semi-solid formulations) is made by combining water and Honey and heating on a low heat until the mixture reaches the desired consistency.¹²
Anushdaru:^[12]

Sikanjbeen: Feesaghorus (Pythagoras) prepared it for the first time. The mixture of Sirka (Acetic acid) and Angbeen (Honey), is called Sikanjbeen. It Sikanjbeen sada is prepared with sugar also.^[12]

Af'āl (Pharmacological actions):

Analgesic (Musakkin-e-Auja'a)^[6]

Nutrient (Mughazzi).^[10,6]

Muhallil-e-Waram. (Anti-Inflammatory)^[10]

Jali (Detergent).^[10,6]

Mufatteh Sudad (Deobstructent)^[10,6]

Mufattit e Hisa't (Lithotryptic).^[6]

Muqawwi e Mida (Tonic for stomach).^[6]

Mushtahi (Appetizer).^[10,6]

Muqawwi e Bah (Aphrodisiac).^[10,6] Daf e Taffun (Antiseptic).^[10,6] Munaffith e Balgham (Expectorant).^[10,6] Musaffi e Dam (Blood purifier).^[10,6] Wounds Healer Mundamil-e-Qurooh (Mundamil-e-Qurooh).^[10,6]

Hadim (Digestive).^[10,6] fig :1

Mulayyen (mild laxative).^[10,6] Mudirr haiz (menorrhagic).^[10,6]

Mudirr labn (milk producing).^[10,6] Muqawwi basr (strengthen eye sight).^[10,6] Muqawwi dimagh (strengthen brain).^[10,6] Muqawwi meda (strengthen stomach).^[10,6] Jali (detergent).^[10,6]

Therapeutic Uses: Moalajatī Iste'mālāt.

Istisqa (Ascites)^[10,6] Unhealed ulcers (quruh muzmina).^[10,6] Dysuria.^[6] Laqwa (Bell's palsy).^[8]

Paralysis (Faliij).^[8] Productive cough (Sual e Balghami).^[8] Cataract.^[6] Otitis media.^[8]

Waja al Uzn (Earache).^[6]

Wounds (Qurooh)^[6] Qubaa(Ring worm).^[8] Waram e Lauzatain Tonsillitis (Waram e Lauzatain)^[8]

Jaundice (Yaraqan)^[6,8]

Expectorant (Munaffith e Balgham).^[8]

Yarqan (jaundice):Asl with kundur(Boswellia serrata Roxb) it is beneficial in jaundice and azm tihal (splenomegaly):^[6] Sore throat (Khushunat e Halaq).^[6]

Chest diseases (Amraz e Ria).^[8,6]

sexual debility (Du' f al Bah)^[6]

Renal calculi (Hisat e Kuliya)^[7]

Intestinal worms (Intestinal worms).^[7]

Heart diseases (Amraz e Qalb).^[13]Juzam (Henson's disease).^[8]

Kalaf (melisma).^[13] Beneficial with Qust (sauseria costus) as local application in kalaf .^[13]

Quba.^[6]

Diseases of females (Amraz e zanana).^[8]

Boils (dummul).^[6, 8]Simne mufrit (obesity).^[6]Otorrhea (sailan uzn).^[8]

Deafness (Behra pan).^[9]

Colitis and intestinal ulcer .^[8]

Boils (dummul): Applied as a paste on the boils.^[8]

Unhealed ulcers (quruh muzmina): applied as a paste with roghan gul(oil of rosa damascene flower).^[13]

Fatila (pessary) made with anzaroot (Astragalus sarcocolla), Ghee (clarified butter) and Asl is beneficial in otorrhea (sailan uzn).^[13]

Also useful in severe deep wounds with zarawand taweel (Aristolochia longa) and flour of pea (peasum sativum).^[8]

Dafe daad (antifungal) with soya (dill) (Anethum graveolance).^[6]

Insect bites: Asl is used with roghan e gul (rose oil) as a local application.^[13]

A paste treats bruises of blunt injuries of namak (sodium chloride) and Honey.^[8]

Kalaf (freckles): used with sirka (vinegar) and namak (sodium chloride) as a paste.^[8]

Simne mufrit (Obesity): used with zeera water (cumin water).^[6]

Muqawwi Bah (Emenogauge) with onion juice (allium cepa).^[8]

Colitis: used with aab bartang (Plantago major Linn.)^[6]

Warm Halaq (pharyngitis): used as a gargle.^[8]

Aashob e chashm (Conjunctivitis).^[8]

Diseases of eyes as a local application.^[6]

Najmul Ghani, a great Unani physician, advised a formulation of Asl (Honey) for local application in Eczema (Nār Fārsī).^[13]

Mudirr bawl (diuretic): works as diuretic if boiled with water.^[13]

Diagnosis of pregnancy:

If pregnant women use it early in the morning, it causes severe pain. This fact is sometimes used for pregnancy diagnosis.^[9]

Muqawwi e meda (strengthens stomach) with mastagi (pistacia lentiscus).^[6]

Prevention from bahaq (pityriasis): Joshanda (decoction) of Maul Asl (honey water), *Ersa* (*iris ensata thumb*), and *baqla* (*sida cordifolia*) is useful in the prevention of bahaq (pityriasis).^[14]

Flavonoids in Honey have been shown to have a variety of biological activities, including antibacterial, antiviral, anti-inflammatory, anti-allergic, and vasodilator properties. Additionally, flavonoids inhibit lipid peroxidation, platelet aggregation, capillary permeability and fragility, and enzyme system activity such as cyclooxygenase and lipoxygenase.^[15]

Scientific studies:

Antibacterial activity:

Honey has antibacterial properties due to low water activity results in osmosis, hydrogen peroxide effect, and high acidity.^[16]

Honey, olive oil, and beeswax formulations have antibacterial properties and treat diaper dermatitis, psoriasis, eczema, and skin fungal infection.^[17]

When applied topically, Honey has anti-angiogenic and anti-inflammatory properties in surgically induced corneal abrasion and exotoxin-induced keratitis.^[18]

Antioxidant effect: In colitis, the damage to the colon has been reduced by Honey.^[19]

Immuno-modulatory activity:

The effects of Asl have been linked to the presence of an unknown component that induces the release of inflammatory cytokines from monocytic cells (Honey). The purpose of this study was to gain a better understanding of Asl reported in vitro effects. The endotoxin content of natural Asl was discovered to be the sole explanation for the in vitro immuno-modulatory effects of Asl. [20]

Antifungal activity:

Amylase, which is present in Asl Khalis, increases the osmotic effect of the medium by increasing the sugar content, thereby increasing antifungal activity. [21]

Activity in wound healing:

By acting as a hyperosmolar medium, Asl (Honey) inhibits bacterial growth. Due to its high viscosity, Honey provides a physical barrier, and the presence of the enzyme catalase provides antioxidant properties. Its high nutritional content increases the supply of local precursors, promoting epithelialization and angiogenesis. Honey possesses these characteristics, which make it an excellent and economical burn dressing. [22]

Honey-based salad dressings provided comparable oxidation protection to EDTA, as measured by the peroxide and panisidine qualities. [23]

Honey, in conjunction with basic wound care procedures, can be used to treat diabetic foot ulcers. [24]

The research backs up the idea that utilizing Honey to treat wounds has clinical benefits. [25]

Antitussive activity:

Asl (Honey) may be an effective treatment for pediatric upper respiratory tract infections that end up causing coughing and sleep problems. [26]

Antiulcer properties:

Asl (Honey) protects against stomach ulcers induced by nonsteroidal anti-inflammatory drugs (NSAIDs). It also reveals that the *Helicobacter pylori*, which is thought to cause peptic ulcers, has been killed by Asl (Honey). [27]

Activity against cataracts:

The synthetic flavonoids luteolin 4'-glucoside, luteolin 3'-7-diglucoside, and orientin prevented cataracts in ovine lenses after 24 hours of incubation in 45 percent hypotonic HBS. It could be considered preliminary evidence for stingless bee Honey's possible anti-cataract effects. [28]

RESULTS AND DISCUSSION:

Asl (Honey) has been used as a sweetener and as an ingredient in multidrug formulations. It is used as Appetizer Aphrodisiac, Cicatrizant antihelmintic, anti-inflammatory, analgesic, Nutrient, Deobstruent, Lithotryptic, Tonic for the stomach, Antiseptic Since ancient times, it has been used dominantly by practitioners of classical Unani medicine. Unani classical literature describes its actions as cleanser (Jālī), Mudammil Qurūh (Cicatrizant) antihelmintic (Qātil-i-Dēdān-iAm'ā), Muhallil-i-Awrām (anti-inflammatory), Musakkin-i-Alam (analgesic), Anti-inflammatory (Muhallil-e-Waram), Analgesic (Musakkin-e-Auja'a), Mughazzi (Nutrient) Mufatteh Sudad (Deobstruent) Lithotryptic (Mufattit e Hisa't), Muqawwi e Mida (Tonic for stomach) Mushtahi (Appetizer) Muqawwi e Bah (Aphrodisiac) Daf e Taffun (Antiseptic. There is adequate data about the morphometric, physico - chemical, and ethnomedicinal properties of Asl (Honey), but there are few pharmacological and clinical studies. The available reports on Asl (Honey) and its products mainly though has shown good results in Antibacterial activity, diaper dermatitis, psoriasis, eczema, and skin fungal infection, Anti-angiogenic and anti-inflammatory properties, Antioxidant effect, Immunomodulatory activity Antifungal activity, Wound healing activity, Antiulcer activity Antitussive activity, Anticataract activity Since small patient groups have limited previous studies, conclusive results cannot be approached.

CONCLUSION:

Honey (Asl) is nutrient-dense and possesses various beneficial properties, including antioxidant, anti-inflammatory, antibacterial, and wound healing. By increasing testosterone levels, it increases sperm count and fertility rate. The primary concern in contemporary medicine is the widespread use of Honey (Asl) in various compositions and the scarcity of clinical research. Additional research should be conducted to determine the efficacy of the actions described by ancient Unani physicians.

ACKNOWLEDGMENT:

The authors express their sincere thanks to Prof. Munawwar Hussain Kazmi, Ex-Director, Professor & Head, Department of Ilmu Advia(Pharmacology). For his kind co-operation, National Research Institute of Unani Medicine for Skin Disorders (NRIUMSD), Hyderabad-500038, India.

Conflict of Interest:

The authors declared no conflict of interest concerning the research authorship and publications.

Funding: No funding sources.

REFERENCES:

1. Vohra SB, Khan MSY. Animal origin drugs used in Unani medicine, Vikas Publishing House Pvt. Ltd, New Delhi: 38, (1979)
2. Stefan Bogdanov, Tomislav Jurendic, Robert Sieber, Peter Gallmann, Honey for Nutrition and Health: a Review, American Journal of the College of Nutrition, 27: 677-689(2008)
3. Banerjee P, Sahoo KN, Biswas TK, Basu SK, Chatterjee J, Hui AK et al. Bees make medicine for mankind, Indian Journal of Traditional Knowledge.; 2(1):22-26,(2003)
4. Anonymous. Carbohydrates and sweetness of Asl Khalis (Honey), National Asl Khalis (Honey) Board, Longmont, Colorado, 1-4.(2008)
5. Nadkarni AK. The India Materia Medica. Bombay: Popular Parkasan: vol 1 p.no.191-192(1976)
6. Abdulhakim M. Bustanul mufradat. Idara kitab-al-shifa, New Delhi: pp.384-385, (2002)
7. Ghulam Nabi M, Makhzan e Mufradat wa Murakkabat, Khawasul Advia, 2nd edition, CCRUM New Delhi: p.161, (2007)
8. Anonymous, the wealth of India, publications and information directorate, New Delhi 1988: vol. 2: B; p.89-95, (1988)
9. Najmulghani AH. Khazain-ul-advia. Idara Kitab-al-shifa New Delhi: pp. 918-921, (2005)
10. Ibn Rushd, A.w.M., kitab ul kulliyat, 1st edition, urdu transation by CCRUM, New Delhi: p.295-96S, (1987)
11. Kabir H, Morakkabat (Unani Formulations), Shamsheer Publisher and Distributors At/ Post Chand Pur Mirza Dist. Aligarh, 1st edition.p.32, (2003)
12. Baghdadi AH. Kitabul Mukhtarat Fit Tibb. Vol.II. New Delhi: Central Council of Research in Unani Medicine: 226, 227, (2005)
13. Ghani N. Qarabadin Najmulghani, CCRUM New Delhi: p 1037, (2010)
14. Ibn zohar A. kitab ul aghdia, urdu translation by ccrum New Delhi: p.130, (2009)
15. Martos MV, Ruiz-Navajas Y, Fernández-Lopez J, Perez-Alvarez JA. Functional Properties of Asl Khalis (Honey), Propolis, and Royal Jelly, Journal of Food Science; 73(9):117-124, (2008)
16. Wahdan H. Causes of the antimicrobial activity of Asl Khalis (Honey), Infection; 26(1):26-31, (1998)
17. Al-Waili NS, Saloom KS, Al-Waili TN, Al-Waili N. The safety and efficacy of a mixture of Asl Khalis (Honey), olive oil, and beeswax for the management of hemorrhoids and anal fissure: a pilot study, Scientific World Journal; 2:6, (2006)
18. Uwaydat S, Jha P, Tytarenko R, Brown H, Wiggins M, Bora PS, Bora NS. The use of topical Asl Khalis (Honey) in the treatment of corneal abrasions and endotoxin-induced keratitis in an animal model. Curr Eye Res.; 36(9):787-96, (2011)

19. Bilsel Y, Bugra D, Yamaner S, Bulut T, Cevikbas U, Turkoglu U. Could Asl Khalis (Honey) Have a Place in Colitis Therapy, Digestive Surgery.; 29:306-312,(2002)
20. Timm M, Bartelt S, Hansen EW. Immunomodulatory effects of Asl Khalis (Honey) cannot be distinguished from endotoxin, Cytokine; 42(1):113-20, (2008).
21. Boukraa L, Bouchehrane S. Additive action of Asl Khalis (Honey) and starch against *Candida albicans* and *Aspergillus niger*, Rev Iberoam Micol; 24(4):309-11,(2007)
22. Bangroo AK, Khatri R, Chauhan S. Asl Khalis (Honey) dressing in pediatric burns, Journal of Indian Association of Pediatric Surgeons; 10(3):172-175, (2005)
23. Rasmussen CN, Wang XH, Leung S, Andrae- Nightingale LM, Schmidt SJ, Engeseth NJ. Selection and Use of Asl Khalis (Honey) as an Antioxidant in a French Salad Dressing System, J. Agric. Food Chem.; 56(18):8650-8657,(2008)
24. Eddy JJ, Gideonsen MD, Mack GP. Practical considerations of using topical Asl Khalis (Honey) for neuropathic Diabetic foot ulcers: A review, Wisconsin Medical Journal; 107(4):187-190, (2008)
25. Robson V, Dodd S, Thomas S. Standardized antibacterial Asl Khalis (Honey) (MediAsl Khalis (Honey)™) with standard therapy in wound care: randomized clinical trial, Journal of Advanced Nursing.; 65(3):565-575, (2009)
26. Paul IM, Beiler J, McMonagle A, Shaffer ML, Duda L, Berlin CM Jr. Effect of Asl Khalis (Honey), dextromethorphan, and no treatment on nocturnal cough and sleep quality for coughing children and their parents, Arch Pediatr, Adolesc Med; 161(12):1140-1146,(2007)
27. Kandil A, EL-Bandy M, Abdel Wahed K, Abdel Gawwad M, Fayez M. Curative properties of true and floral and false non-floral hone on induced gastric ulcer, J Drug Res. (Cairo); 17:103(1987)
28. Vit P, Jacob TJ. Putative Anti-cataract Properties of Asl Khalis (Honey) Studied by the Action of Flavonoids on a Lens Culture Model, Journal of Health Science; 54(2):196-202, (2008)
29. Ibn Baitār ZAAAA. Al Jamai-ul-Mufradāt al Advia wal Aghzia Volume 3rd. CCRUM. New Delhi.; pp. 271-274,(1999).

