

Therapeutic Approaches of Unani Medicine in the Management of Sinusitis (Waram-e-Tajaweef Anf): A Review

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Abstract

Sinusitis is a widespread inflammatory condition affecting the paranasal sinuses, commonly caused by infections, allergens, environmental triggers, or structural abnormalities. In modern medicine, it is classified by the duration into acute, subacute, and chronic types. In Unani medicine, although the exact term “sinusitis” is not used, the condition is addressed under Nazla Hārr (hot catarrh) and Nazla Bārid (cold catarrh), which is equivalent to acute and chronic sinusitis, respectively. This study aims to correlate these Unani classifications with modern clinical understanding and to assess traditional Unani therapeutic approaches for managing sinusitis. Based on a descriptive review of classical Unani literature and contemporary medical sources, it was found that scholars like Ibn Sīnā, Ghulam Jeelani, and Muḥammad Ṭabarī consider sinusitis to arise from humoral imbalance, typically influenced by environmental and dietary factors. Treatment in Unani practice includes Ilāj bi'l Tadbīr (regimenal therapy), Mundij-Mushil (concoctive and purgative therapy), and herbal formulations, supported by techniques such as decoctions, nasal drops, steam inhalation, and lifestyle changes aimed at restoring balance and eliminating harmful humours. While modern treatments may provide temporary relief, they often have side effects and do not guarantee a cure. Unani approaches offer a personalised, holistic alternative, and further clinical validation may enhance their role in integrative care.

Keywords: Waram-e-tajaweef anf, Nazla Hārr, Nazla Bārid, Sinusitis.

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INTRODUCTION

Sinusitis is a condition characterized by inflammation of the mucous membrane that lines the paranasal sinuses, air-filled spaces located within the bones surrounding the nasal cavity. This inflammation can result from infections, allergies, environmental factors, or underlying structural abnormalities. Clinically, sinusitis is categorized based on the duration and frequency of symptoms, which helps guide diagnosis and treatment [1–3].

Acute sinusitis is characterized by a sudden onset of infection lasting up to four weeks, often following an upper respiratory tract infection. Common symptoms include nasal congestion, facial pain or pressure, headache, fever, and purulent nasal discharge. Based on the severity of these symptoms, acute sinusitis is classified into severe and nonsevere types. Recurrent acute sinusitis is defined as four or more separate episodes within a year, each resolving completely between episodes. This pattern may indicate underlying

factors such as allergies, anatomical abnormalities, or immune system deficiencies. Subacute sinusitis represents an intermediate stage, where symptoms last longer than four weeks but less than twelve weeks. It usually stems from incomplete resolution of acute sinusitis and presents with similar but milder symptoms. Chronic sinusitis, or chronic rhinosinusitis, is diagnosed when symptoms persist beyond twelve weeks despite treatment. It is often accompanied by ongoing nasal blockage, facial pressure, a diminished sense of smell, and continuous nasal discharge. Chronic sinusitis typically has multiple contributing factors, such as biofilms, nasal polyps, allergies, and immune dysfunction, and often requires both medical and surgical interventions [4]. An acute exacerbation of chronic sinusitis refers to a temporary flare-up in a patient with chronic sinusitis, where symptoms worsen to resemble those of acute sinusitis before settling back to the chronic baseline after treatment [5, 6].

Apart from these time-based classifications, sinusitis is also categorized based on cause and

transmission. Nosocomial sinusitis occurs in hospitalized patients, often associated with prolonged use of nasogastric or endotracheal tubes. Sinusitis in immunocompromised individuals, such as those with HIV/AIDS, cancer, or undergoing chemotherapy, can be more severe and may require specialised care. Odontogenic sinusitis originates from dental infections or procedures, particularly involving the upper teeth, due to the close anatomical relationship between the roots of the teeth and the maxillary sinuses [3].

In Unani medicine, although the term *Waram-e-tajaweef anf muzmina* (chronic inflammation of the nasal cavities or chronic sinusitis) is not explicitly detailed as a standalone disease, the condition is indirectly described through the discussions of *Nazla Hārr* (hot catarrh) and *Nazla Bārid* (cold catarrh) in classical Unani texts. These two conditions broadly encompass the signs and symptoms associated with both the acute and chronic forms of sinusitis [7].

Nazla Hārr is typically characterized by acute onset symptoms such as headache, nasal discharge (often yellow or green), heaviness in the head, fever, and sometimes a burning sensation in the nose and throat. These symptoms correlate closely with what modern medicine identifies as acute sinusitis or *Waram-e-tajaweef anf Hādda* in Unani terms [8, 9].

On the other hand, *nazla bārid* presents with more persistent, milder symptoms like clear nasal discharge, nasal congestion, postnasal drip, a feeling of heaviness in the head, and occasional cough. These chronic, long-lasting symptoms mirror those of chronic sinusitis or *waram-e-tajaweef anf muzmina* in modern clinical terminology [10, 11].

Thus, although the exact term “chronic sinusitis” may not be found verbatim in Unani texts, the Unani classification of nasal conditions provides a comprehensive framework that aligns with both acute and chronic forms of sinus inflammation known today. The signs and symptoms described by Unani physicians for *Nazla Hārr* (hot catarrh) and *Nazla Bārid* (cold catarrh) in traditional Unani literature show a strong resemblance to what modern medicine defines as acute and chronic sinusitis, respectively. These ancient classifications, though not identical in terminology to modern diagnostics, offer a clinical picture that aligns closely with contemporary understanding [12–14].

METHODOLOGY

The present study adopts a descriptive and analytical review methodology to explore the Unani conceptualization and management of *Waram-e-tajaweef anf* (sinusitis) in light of classical texts and modern clinical literature. Primary sources include foundational Unani works such as *Al-Qānūn fi'l Tibb* (Ibn Sīnā), *Kitāb al-Hāwī fi'l Tibb* (Rāzī), *Tibb-i-Akbar* (Arzānī), *Iksīr-i-A'zam* (A'zam), and writings of

scholars like Ghulam Jeelani, Muḥammad Ṭabarī, and Kabīruddīn. Modern medical sources were identified through searches in PubMed, Medline, and Google Scholar using terms related to sinusitis and traditional medicine. The study focused on texts discussing *Nazla Hārr*, *Nazla Bārid*, and *Zukām*, correlating them with acute and chronic sinusitis, respectively. The methodology involved the extraction, comparison, and interpretation of Unani descriptions with contemporary pathophysiology and treatment outcomes to highlight the potential integration of Unani principles in current sinusitis care.

Etiopathogenesis

According to the renowned Unani scholar Ghulam Jeelani, the term *Nazla* is etymologically derived from the Arabic word *Nuzool*, which translates to “dripping down,” indicating the movement of fluid from one place to another, particularly from a higher to a lower region. In the Persian language, this condition is referred to as *Rezish*, a term that also implies a downward discharge. Jeelani elaborated that *Nazla* is not merely a symptom but a pathological condition characterized by inflammation and irritation of the nasal mucosa, which leads to the production of excessive secretions. These secretions do not remain localised in the nasal cavity but instead descend into deeper regions of the respiratory tract, including the chest (*sadr*), the thoracic area (*jauf-e-sadr*), and the larynx (*Ḥanjara*) [12–15].

This downward flow of mucus results in a variety of clinical symptoms, such as coughing, throat irritation, hoarseness of voice, chest congestion, and sometimes difficulty in breathing, especially when the mucus accumulates in the lower respiratory pathways. In Unani medicine, *Nazla* is considered a systemic manifestation of humoral imbalance, particularly involving *Balgham* (phlegm), although it can also involve other humours depending on the underlying cause and constitution (*Mizāj*) of the individual. Environmental factors, dietary habits, seasonal changes, and internal imbalances are all seen as potential triggers of *Nazla* [16, 17].

According to the esteemed Unani physician Ibn Sīnā (Avicenna), the primary causes behind the development of *Nazla wa Zukām* (inflammatory conditions affecting the nasal passages and respiratory tract) are rooted in *Asbāb-e-Khārijia*, meaning external or environmental factors. These external influences are considered significant in disrupting the natural equilibrium of the body, particularly the temperament (*Mizāj*) of the nasal cavity and upper respiratory system [18, 16].

Ibn Sīnā explains that when the body, especially the nasal mucosa, is exposed to extreme environmental conditions, it may respond by producing abnormal

secretions and inflammation. These extremes include: [18, 19].

1. **Excessive Cold and Dryness (Burūdat-o-Yubūsat):** Cold, dry air dries out the nasal mucosa, causing irritation and inflammation, which leads to abnormal humour flow and symptoms of Nazla wa Zukām.
2. **Excessive Heat and Moisture (Ḥarārat-o-Ruṭūbat):** Hot and humid weather increases bodily fluids, especially Balgham (phlegm), causing its accumulation and downward flow into the nasal cavity, throat, and chest.
3. **Excessive Heat and Dryness (Ḥarārat-o-Yubūsat):** This disturbs the mucosal moisture balance, causing inflammation, nasal discharge, and respiratory discomfort.

Mechanical Irritants:

Dust, feathers, pollen, and cotton fibers, when inhaled, irritate the nasal mucosa, disturbing its temperament and triggering excessive mucus secretion. This leads to symptoms of Nazla wa Zukām such as sneezing, nasal discharge, throat irritation, and chest congestion [20, 18].

Muḥammad Ṭabarī, a prominent scholar of Unani medicine, offers a detailed classification of Zukām (commonly understood as rhinitis or nasal catarrh) into three distinct types, each based on its causative factors and underlying pathophysiology. His classification not only highlights the influence of external and internal factors but also underscores the role of humoral imbalance in the development of disease [21- 16].

1. **Zukām Due to Environmental (Cold) Factors:** This type is caused by prolonged exposure to cold, damp weather or sudden temperature changes. It disrupts the natural temperament (Mizāj) of the nasal mucosa, increasing phlegmatic secretions and leading to symptoms like nasal congestion, watery discharge, sneezing, and headache.
2. **Zukām Due to Excessive Heat in the Head:** Triggered by factors such as sleeping under sunlight, exposure to heat, or use of hot hair oils, this form increases heat (Ḥarārat) in the brain. It causes fermentation of humours into waste matter, resulting in thick nasal discharge, heaviness in the head, fever, and burning sensations in the nose and eyes.
3. **Zukām Due to Humoral Accumulation in the Brain:** Caused by lifestyle issues like poor digestion, sedentary habits, or faulty diet, this type involves accumulation of humours—especially phlegm (balgham) or black bile (sawdā)—in the brain. It presents as a more chronic form with systemic symptoms such as fatigue, mental fog, and persistent nasal discharge.

In all three types, Ṭabarī emphasizes that Zukām arises from a disturbance in the body's natural balance, prompting the brain to expel altered humours via the nasal passage. His classification reflects Unani medicine's holistic approach, focusing on correcting the underlying Mizāj rather than merely relieving symptoms.

Hakim Muḥammad Kabīruddīn writes that, Sū'-i-Mizāj of the brain is the cause of the disease. The exposure to extreme cold results in the thickness of the scalp and the pores of the skin get closed, and the evaporation of mawād stops and gets accumulated in the brain [23].

Hakim Muḥammad Hassan Qureshi, in his work Jāmi'al-Hikmat, stated that one of the causes of Nazla and Zukām is the cold temperament (bārid Mizāj) of the brain. He explained that when the brain becomes cold, it contracts, resulting in the expulsion of ruṭūbat (moisture). He also identified a hot temperament (Ḥār Mizāj) of the brain as another factor that can lead to the release of ruṭūbat. According to him, if the source of the disturbance is in the frontal region of the brain, the discharge flows into the nasal cavity, producing Zukām. However, if the disturbance originates from the hind part of the brain, the discharge travels downward into the throat, manifesting as *Nazla* [24-19].

‘Alī ibn ‘Abbās Majūsī, in Kāmil al-Ṣanā‘a, discusses nasal diseases and explains that Iltihāb Ḥār (hot inflammation) and Iltihāb Barid (cold inflammation) can affect the nasal mucous membrane, leading to symptoms such as heaviness (girani) and congestion (tamaddud). He further notes that obstruction (Ṣudā‘) in the cavities of the nasal bones may be a potential cause of Muzmin Iltihāb Tajaweef-e-Anaf (chronic sinusitis). A similar description of Anfi Ṣudā‘ (nasal obstruction) is also mentioned in Ghinā Munā [26].

According to Ibn Sīnā, structural abnormalities in Majārī (ducts) and Tajaweef (cavities) can contribute to disease development. Majārī refers to channels or pathways that allow substances to flow through, while Tajaweef are hollow spaces within organs that hold or permit the movement of fluids or other materials. Ibn Sīnā outlined several types of deformities [19].

In the ducts (Majārī):[27–29]

- Abnormal widening (dilatation)
- Constriction or narrowing (contraction)
- Complete blockage or occlusion

In the cavities (Tajaweef):

- Enlargement
- Reduction in size
- Obstruction
- Unnatural emptiness

Further, it is caused by Sū' Mizāj Ḥārr, Sū' Mizāj of brain, Du'f-i-Dimāgh, Imtilā' aam wa Ra's (plethora of body and head), Tukhma, Infi'ālāt Nafsāniyya and Seasonal variation.

DISCUSSION

Sinusitis affects people across all age groups, with a higher prevalence among younger individuals, and in some cases, it may lead to significant health issues. In modern medicine, treatment typically involves antibiotics, decongestants, and antihistamines. However, these medications do not always lead to complete recovery, and many patients eventually require surgical procedures such as antral puncture and drainage. Even then, a permanent cure is not guaranteed. Many sinusitis sufferers become reliant on painkillers, which, when used long-term, can lead to harmful side effects. Despite medical advancements, chronic sinusitis remains a common and challenging condition due to its potential complications, including brain abscess and otitis media.

In such conditions, Unani medicine has demonstrated its value due to its effectiveness, affordability, and minimal side effects. The general approach to treating chronic sinusitis in Unani involves correcting the imbalance of humors, eliminating excess and morbid balgham (phlegm), and reducing local inflammation. The medications used in this system possess properties such as Mulaṭṭif (softening/demulcent), Mundiḡ (maturative/deobstruent), Munaffith-i-Balgham (expectorant), and Muḥallil-e-Awrām (anti-inflammatory). Based on Unani classical texts, compound formulations containing ingredients like Ustukhuddoos (Lavandula), Filfil Siyah (black pepper), and Aslussoos (licorice) are recommended and considered effective in managing Iltihāb-e-Tajaweef-e-Anaf Muzmin (chronic inflammation of the nasal sinuses).

Preventive Measures: [22]

Avoid daytime sleep and sleep on back, or sleep immediately following meal.

Precautions from oily, ghalīz, lesdaar and delayed digestible foods, meat, alcohol, onion, garlic, tea, akhrot, pista, etc., sour things like milk, curd, along with ghalīz and saqeel ghidhā', but if they feel weakness in the body, they can use chicks with meats (ratab gosht), curd.

Reduce the quantity of food and drink. Try to avoid exposure to sunlight, hot or cold air and water.

Avoid strenuous exercise or physical activities. Samaghe suddab and Rai should be applied on the head immediately after bath.

No excessive use of seasonal fruits and khushboodar snuff (extreme flavours).

Usool-E-Ilaj:

The treatment approach includes general, local, and preventive or prophylactic measures. General treatment focuses on balancing the disturbed humours and correcting the imbalanced temperament.

In chronic conditions, drugs with concoctive, anti-inflammatory, and antiseptic properties are used. These help in resolving inflammation and rectifying the altered cold temperament and predominance of the phlegmatic humour.

The treatment for chronic inflammation, known as waram-e-muzmin, involves identifying and eliminating the cause, resting the affected area, administering concoctions, anti-inflammatory and antiseptic drugs locally, using inkibāb and inhalation, and enhancing the body's natural healing processes [30, 22]

Initial Stage: Adopting symptomatic measures.

- Try to expel the mādda by inkibāb with Banafsha, Nilofar, Nakhuna and Babuna, and apply fateela in the nose to divert the mādda from throat or chest.
- Faṣḍ is advisable if Khilṭ Damawī is involved, followed by mushilat.
- Lateef ghidhā', like maushaeer Munzijat, hamam by lukewarm water is advisable before prescribing munzijat.
- Snuffing by lukewarm shoneez and zeera. Should not use any medicines to arrest sneezing, this may interfere with the Nuḍj of the Mādda, leading to collection of Fuḍlāt in the brain.

Nuskha (Unani Formulation)

For Acute Sinusitis:[31,32]

Prepare a decoction with 5 pieces of Unnab, 9 pieces of Sapistan, 3 grams of bah-e-dana, 5 grams of khatmi, and 5 grams of Barg-e-gaozaban. Add 20 ml of Sharbat-e-banafsha to the decoction.

For fever, include 20 ml of Sharbat-e-khaksi.

For throat pain, add 20 ml of Sharbat-e-toot siyah.

To alleviate pain, use either 10 grams of khamera khashkhas, Sharbat-e-khashkhas, 1 piece of Hab-e-jadwar, or 1 gram of Barshasha.

If patient having problem in difficulty in breathing then advised of Laooq katan (6gm), inhalation of Arq ajeeb (2-5 drops).

'Ilāj bi'l Tadbīr (Regimenal therapy):[33]

- Qaṭīr (Nasal Drops): Use Alum (Phitkari) in Arq-e-Gulaab.
- Zimaad (Topical Application): For headache, mix equal parts of gul-e-machkan, kishneez

sabz, and sandal safed, and apply on the forehead.

- Inkibāb (Inhalation): Use gul-e-Baboona and gul-e-banafsha.

For Chronic Sinusitis:

Soak the following ingredients overnight: 7 grams of Barg-e-Gaozaban, 5 grams of Gul-e-Gaozaban, 5 grams of Aslussoos, 5 grams of Aab Resham Kham Makrash, and 5 grams of Saboos Gundam. In the morning, prepare a decoction from the soaked mixture, then add Sharbat-e-Banafsha before use.

Take 7 grams of Gul-e-Banafsha, 5 grams of Gul-e-Gaozaban, and 5 pieces of Unnab. Prepare a decoction from these ingredients, then add sugar for taste. In case of fever, mix in 20 ml of Sharbat-e-Khaksi before use.

As a Unani compound formulation, the following medications are prescribed:[32]

- Lauq Sapistan – 7 grams
- Khameera Gaozaban – 7 grams
- Tiryaaq Nazla – 7 grams
- Lauq Sapistan Khayarshambari – 7 grams

‘Ilāj bi’t Tadbīr (Regimenal Therapy):[33]

Nasal Cleansing: Rinse the nose using a solution made by mixing 3 grams each of Namak Taa’m and Bora Armani in 250 ml of neem water.

Qaṭūr (Nasal Drops): Instill drops prepared from Alum (Phitkari) dissolved in Arq-e-Gulaab.

Inkibāb (Steam Inhalation): Various combinations can be used:

- Barg-e-Tulsi, Gul-e-Baboona, Mako Khushk, and Barg-e-Pudina
- Gul-e-Baboona, Gul-e-Tesu, and Gul-e-Banafsha
- Barg-e-Tulsi, Barg-e-Gulaab, and Barg-e-Pudina
- Barg-e-Neelgiri (Eucalyptus) and Barg-e-Pudina

Naṭūl Therapy (Medical Irrigation): Prepare a decoction from Barg-e-Neelgiri (Eucalyptus) and Darchini (Cinnamon) for pouring over the affected area.

Pāshoya (Foot Soak): Use a decoction made from Barg-e-Beri and Saunf (Fennel) for soaking the feet.

Mundij-Mushil Therapy:

Mundij Formulation: Soak the following ingredients overnight: 7 grams of Gaozaban, 5 grams of Gul-e-Gaozaban, 7 grams of Beekh Kasni, 7 grams of Badyan, 9 pieces of Maveez Munakka, and 5 grams of Ustikhaudoos. In the morning, prepare a decoction and mix it with Sharbat-e-Banafsha before use.

Mushil (Purgative) Formulation: After administering the Mundij formulation for 10 to 12 days, introduce 7 grams of Sana-e-Makki and 40 grams of Magaz Khayar Shambari as a purgative.

Tabrid (Cooling) Formulation: Take 5 grams of Khameera Gaozaban Ambari Jawahar Wala with 120 ml of Arq-e-Gaozaban for cooling and temperament correction.

Post-Meal Regimen: At night, after meals, take 7 grams of Jawarish Jalinoos along with Tiryaaq Nazla.

CONCLUSION

Sinusitis, particularly in its chronic form, poses significant challenges due to its recurring nature and impact on quality of life. Unani medicine, through its rich heritage and holistic approach, provides a comprehensive framework for understanding and managing this condition. The correlation of chronic sinusitis with Nazla Bārid and Waram-e-Tajaweef-e-Anf Muzmin offers valuable insights into its humoral basis, etiopathogenesis, and temperament imbalance.

Management strategies in Unani medicine, including Ilāj bi’t Tadbīr (regimenal therapy), Mundij-Mushil therapy (concoctive and purgative treatment), and the use of single and compound formulations, aim to restore balance by expelling morbid humours and improving natural defense mechanisms (Tabi’at). Inhalations, nasal drops, decoctions, and lifestyle modifications not only offer symptomatic relief but also address the root cause in accordance with Unani principles.

Therefore, integrating Unani practices with evidence-based approaches may provide safer, cost-effective, and personalized alternatives in the management of sinusitis. Further clinical validation of these traditional therapies can open new avenues for integrative healthcare.

Conflict of Interest: There is no conflict of interest.

REFERENCES

1. Ah-See KW, Evans AS. Sinusitis and its management. *BMJ*. 2007 Feb 17;334(7589):358–61.
2. Hamilos DL. Chronic sinusitis. *J Allergy Clin Immunol*. 2000 Aug;106(2):213–27.
3. Dhingra PL dhingra S. mebooksfree.com.
4. Kayum MA, Qiyyum IA, Jabeen A, Nawab M. Evaluating Clinical Efficacy and Safety of A Unani Formulation in the Management of Nazla-i-Muzmin (Chronic Rhinosinusitis). *Cellmed [Internet]*. 2021;11(2):9. Available from: <http://dx.doi.org/10.5667/CellMed.2021.0009>
5. Sinusitis R. Anatomy and pathogenesis. 2009;49(76):126–39.

6. BHargava KB. ENT diseases. Usha Publications; 192 p.
7. Tib M. Evaluation of Efficacy of a Unani Formulation in the Management of Warm Tajaweef-e-Anaf Muzmin. 2007;
8. Ismail J, Shahi ZK. Urdu translation by Khan HH. Vol. 2 Part 6. New Delhi : Idara Kitabus Shifa; 2010. 201–203 p.
9. Ghani N. Khazainul Advia. New Delhi : Idara Kitbus Shifa; 2011. 1133–1135 p.
10. Chaturvedi M. International Journal of Current Advanced Research. Notes. 2017;1(June 2019):444.
11. Fazeenah AHA, Lecturer S, Lanka S, Officer CM, Dispensary FA. Therapeutic Effects of Unani Formulae in the Management of Iltihaab Tajaveef Anf Muzmin (Chronic Rhinosinusitis) – A Preliminary Study. 2021;9(3):4625–30.
12. Jeelani G. Maghzanul Ilaj. Vol. 1. New Delhi: Idara Kitabus Shifa; 169–171 p.
13. Kabeeruddin M. Ifada-e-kabeer, Sharah Muajjizul Qanun. New Delhi.: Idara kitabushshifa; 1947. 231–32 p.
14. Qureshi MH. Jamiul Hikmat,. Vol. 2. Lahore.: Kareemi Press; 1935. 964–965 p.
15. Baghdadi Ibne Hubal. Kitabul Mukhtarat fil Tib (Urdu Translation). Vol. 3. New Delhi: CCRUM Health and Family Welfare Government of India; 2004. 130 131.
16. Alam MT, Sheeraz M, Ahmed M. A clinical study of Unani formulation in the management of chronic sinusitis : An open randomized , controlled study. 2024;8(1):34–42.
17. Kausar Chandpuri. Moajizul Qanoon. New Delhi: National Council for Promotion of Urdu Language; 1998. 283–264 p.
18. Ibn Sina. Al Qanoon fit Tibb. (Urdu translation by Kantoori GH). Vol. 3. New Delhi: Aijaz Publishing house; 2010. 660–663 p.
19. Nawaz M. Evaluation of efficacy of Unani formulation in the management of Warne Tajaweef-e-Anaf. [Banglore]: Rajiv Gandhi University, ; 2007.
20. Kabeeruddin Hkm. Makhzan-ul-Mufradat Al-maaruf khwas-ul-Advia .
21. Tabri A bin M. Al Moalajat Buqratiya. Vol. 2. New Delhi: CCRUM; 1997. 392–397 p.
22. Reza S, Ahmad R, Rahman N, Alam T. Iltihab-E-Tajaweef-E-Anaf Muzmin (Chronic Sinusitis)- A Review. Am J Pharm Heal Res. 2020;8(8):58–72.
23. Azam KM. . Ikseer-e-Azam (Urdu Translation by Mohammad Kabiruddin). 2010. 661–673 p.
24. Hafidh M, Harney M, Kane R, Donnelly M, Landers R, Smyth D. The role of fungi in the etiology of chronic rhinosinusitis: A prospective study. Auris Nasus Larynx. 2007 Jun;34(2):185–9.
25. Finegold SM, Flynn MJ, Rose FV, Jousimies-Somer H, Jakielaszek C, McTeague M, et al. Bacteriologic Findings Associated with Chronic Bacterial Maxillary Sinusitis in Adults. Clin Infect Dis. 2002 Aug 15;35(4):428–33.
26. Majoosi AIA. Kamil al sinaa'at (Urdu Translation Kantoori). New Delhi: Idara Kitab-ul-Shifa; 2010. 516–518 p.
27. Lund VJ. Surgical outcomes in chronic rhinosinusitis and nasal polyposis. Rhinology [Internet]. 2006 Jun;44(2):97. Available from: <http://europepmc.org/abstract/MED/16792165>
28. Lusk R. Pediatric chronic rhinosinusitis. Curr Opin Otolaryngol Head Neck Surg. 2006 Dec;14(6):393–6.
29. Qureshi AA. Tarjuma Sharhe Maujiz. 3rd ed. Vol. 1 Part 2. 508–511 p.
30. Kirmani Nafees Bin Auz. Sharah Asbab (Translation by Mohammad Kabeeruddin). . Vol. 2. New Delhi: Eijaz Publishing House; 635 p.
31. Khan MA, Akseer-e-azam (Al Akseer). Urdu translation by Hakeem Kabeeruddin. Idara kitab ul Shifa. 2011;
32. Zehra A, Mannan A, Naseer M, Zafar M, Farooqui Y, . K. Implications of Unani medicine in the management of Covid-19: An overview. Int J Unani Integr Med. 2021;5(1):20–3.
33. Md Arif. Text Book of ENT with Regimental Therapy. Bhopal: UP computers; 2018. 263–270 p.