



An overview of *Shara* (Urticaria) and its management in the perspective of unani system of Medicine:- A Review

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Abstract

Shara (Urticaria) is an inflammatory skin disorder that affects up to 20% of the world population at some point during their life. It presents with wheals, angioedema or both. Most cases of urticaria are acute urticaria, which lasts ≤ 6 weeks and can be associated with infections or intake of drugs or foods. Chronic urticaria is either spontaneous or inducible, lasts > 6 weeks and persists for > 1 year in most patients.

Urticaria name come from Latin word *urtica* and *urere*, which means nettle and to burn. It is commonly called hives and a type of skin rash notable for pale red, raised, itchy lesions. The cause of Urticaria is the *Fasad-e-Dam* (blood impairment) caused by the *vapors of Dam-e -Merari* (bilious blood) or *Balgham-e-Boraqi* (acidic phlegm) coming towards the skin or periphery of the body.

Signs and symptoms of *Shara* (Urticaria) are recurrent evanescent skin eruptions, feeling of heat and pricking sensation just before the appearance of lesions. Edematous wheals surrounded by a red flare, intense itching which is associated with burning sensation and increase in the evening time, mild to severe pruritus.

Keywords: Unani Medicine, *Fasad-e-Dam*, *Dam-e-Merari*, *Balgham-e-Boraqi*, *Shara* (Urticaria).

Introduction

The term Urticaria is used increasingly to describe a condition that manifests as fleeting itchy hives, angio-oedema or both that usually persist for < 24 h.[1,2]

Angio-oedema is a descriptive term for deep swellings of the dermis, subcutaneous or submucosal tissues. They are usually painful, rather than itchy, poorly defined and normal in colour. Angio-oedema presents with mast cell mediated (eg; Spontaneous urticaria) or, much less commonly bradykinin mediated (eg; Hereditary Angio-oedema).[1]

It is estimated that approximately 20% of total population are affected by this condition once in their life and is regarded as fourth most prevalent allergic disease [3,4]

Urticaria is classified, first based on its duration as acute urticaria, lasting ≤ 6 weeks, or chronic Urticaria, lasting > 6 weeks.[5] Urticaria is further divided into inducible and spontaneous forms. In inducible urticaria, the signs and symptoms are induced by a subtype- specific and definite trigger, for example cold in cold urticaria. In spontaneous urticaria, the signs and symptoms appear unprompted, and there are no definite triggers, although stress, infections and other aggravators

can increase disease activity in some patients. Spontaneous urticaria is more common than inducible urticaria and both can coexist in the same Patient [3, 5]

Acute urticaria is more prevalent in young patients while chronic type is mostly found in middle-aged women. Urticaria is not a life threatening disorder, but it can be a disabling and reduces quality of life and significant socioeconomic burden.[6,7]

In *Unani literature*, Urticaria has been described by the name of *Sharā* Hippocrates was the one who first described this disease. [29] Urticaria is also commonly known as *Pitti Uchalna* It is mentioned as a condition in which elevated lesions appear abruptly on the skin caused by exaggeration in *Hād Damawī*, *Balghamiī* and *Sawdāwī Bukhārāt* (sanguineous, phlegmatic and melancholic vapours of strong nature) coming towards the skin or periphery of the body.[8,14] Excessive ingestion of heavy foods, indigestion, constipation, eruption of teeth in children and menstruation are considered as the predisposing factors for this disease.[8] Hot season and ingestion of fresh fruits have been described as important etiological factors for *Sharā*. [15] Hot foods such as brinjal, mango, meat etc. are also mentioned as its causes [16] including salty meat and fish, and some drugs like turpentine oil. [17] This disease is characterized by abrupt development of itchy wheals

during day time (if caused by sanguineous vapours) or whitish rashes during night (if caused by phlegmatic vapours) or blackish rashes with mild itching (if caused by melancholic vapours).[12]

Methodology

The author searched the *Unani* medicine books for information related to *Sharā*. Important textbooks of *Unani* medicine were reviewed. *Al-Qānūn fi'l Tibb* of Ibn Sīnā, *Kāmil al-Sanā'a al-Tibbiyya* of Abbās Majūsī, *Kitāb Al-Manṣūrī* of Zakariya Rāzī, *Ghinā Munā* of MH Quamrī, *Iksīr-i'Aẓam* of 'Aẓam Khān etc. were searched for information on *Sharā*. Major scientific databases namely Pubmed, Science Direct and Springer were searched. The search words used were 'Urticaria and *Unani*', 'Urticaria and *Sharā*'. Internet search on the same search engines and also on Google Scholar was done.

Type of *Shara* (Urticaria) according to involvement of Akhlat (humour)[10,13,18,19]

❖ ***Shara Damvi*** : According to *Shaikh*, this is due to domination of *Khilt-e-Dam* (blood). It is mostly occur in night and it is more intense sometimes grief makes it more intense. According to *Allama Najeebuddin Samarqandi*, this sanguine type of *Shara* (Urticaria) is red, hot and more frequent in the day time.

❖ ***Shara Safravi*** :-In this type of *Shara* (Urticaria) is sudden and associated with fever, sometimes due to *Balgham Boraqi* (salty phlegmatic). It has more red in colour and associated with warm. According to *Shaikh Abu Ali Sina* this type of *Shara* (Urticaria) *Safrawi Shara* (Bilious Urticaria) mostly occurs at night.

❖ ***Shara Balghami*** :-According to *Allama Najeebuddin Samarqandi*, this type of *Shara* (Urticaria) is white in colour and occurs mostly in night.

❖ ***Shara Saudawi***:- *Shara Saudawi* 's wheals are blackish in colour with other symptoms of *Ghalba e Sauda* . There may be history of fainting attacks. It is usually chronic in nature and sometimes persists for the whole life.

According to *Ali Ibn Abbas Majoosi* he saw a patient having muzmin *Shara* (Urticaria), he was having the dominancy of *Saudawi khilt* in his body and his blood got affected. In his treatment *Ali Ibn Abbas Majoosi* used the principle of treatment of the *Juzaam* (leprosy) and the patient got relieved.

Historical Perspective:

The school of Hippocrates (460-377 BC) first described the association of urticaria with nettles and insect bites. The name "nettles" frequently appeared in several languages until the middle of the 19th century. The word "urticaria" was first used in 1792 by Johann Peter Frank to describe the disease. In 1910, Henry Dale clarified the physiological role of histamine on smooth muscle. In 1937, Daniel Bovet developed antihistamine, which became the mainstay of treatment for urticaria. In 1953, James F. Riley showed that mast cells are the main source of histamine in the skin. In 1966, Kimishige Ishizaka identified immunoglobulin (Ig)E and clarified its role in type I hypersensitivity, the pathological mechanism of allergic urticaria.[20]

Pathogenesis:

❖ Basic pathology is vasodilation of vessels which leads to leakage of fluids into the surrounding tissues (dermis and subcutis).

❖ This is mediated by histamine and other proinflammatory mediators which are released from mast cells by several mechanisms:

➤ Immunological mechanisms:

❖ IgE mediated: antigens bind to IgE antibodies and this complex binds to F_c cell surface receptors of mast cells/ basophils inducing release of histamine and other mediators.

❖ Autoimmune: due to formation of antibodies to F_c receptors.

❖ Complement mediated: through classical pathways

➤ Non immunological: direct degranulation induced by drugs and chemicals.

Histamine act on H₁ receptors located on endothelial cells to cause the wheal and on sensory nerves to cause the neurogenic flare and pruritis. [21]

Etiology:

The major factors responsible include drugs such as penicillin, aspirin, sedatives, tranquilizers etc.; foods and food preservatives such as fish, cheese, milk, eggs, nuts, benzoic acid derivatives etc.; inhalant allergens, for example, pollens, animal dander, mold spores etc.; infections of teeth, tonsils, sinuses, chest etc.; insect bites and stings; penetrants and contactants comprising of foods, textiles, medicaments, chemicals, cosmetics etc.; physical stimuli including friction, pressure, vibration, heat, cold, sweat etc. and some internal diseases. Psychogenic factors, for example, anxiety, stress also plays an important role in producing Urticaria. [22,24]

Pathophysiology :

The word 'urticaria' has been derived from the stinging nettle plant (Latin, urtica), as its rash looks like reaction of a nettle sting. [25] Moreover, this plant is also known to contain histamine and pathophysiology of urticaria is mainly associated with the release of histamine. Along with histamine some other mediators such as tryptase, heparin, proteoglycans, chondroitin sulphate A & B and leukotriens (LTB4 and LTC4) are also responsible.[26] These mediators are secreted from mast cells mainly located in tissue and basophils mainly found in tissue as well as circulation. Both these cells play a major role in pathogenesis of urticaria. Additionally, mast cells secrete prostaglandin D2 (PGD2) as well as IL-5, IL-6, TNF- α . Several soluble serum factors, cytokines and other factors that causes release of histamine from basophils also plays major role in pathogenesis. Autoimmune urticaria mainly occurs by IgG autoantibody, but still the pathophysiology of role of mast cells and basophils in urticaria remains unproven. [27,28]

Clinical Features:

❖ Circumscribed, raised, usually pruritic, and evanescent areas of edema that involve the superficial portion of the dermis are known as wheals.

❖ A wheal may appear mostly reddish but could also be whitish, especially when edema is significant.

❖ Edema that extends into the deep dermis or subcutaneous and submucosal layers is known as angioedema.

❖ Angioedema may be painful but not pruritic and may last for several days. Involvement of the lips, cheeks, and periorbital areas is common, but it may also affect the tongue, pharynx, or larynx. [20]

Diagnosis:

A detailed history and physical examination are the essential first steps in the diagnostic workup of all patients with urticaria. However, as wheals and angioedema are transient and may not be present at physical examination, physicians should also review patients' pictures or their documentation of signs and symptoms.

Dermographism is evoked by stroking the skin, pressure Urticaria is tested by application of pressure (weight) perpendicular to the skin. Cholinergic Urticaria can be diagnosed by exercise to sweating and intracutaneous injection of acetylcholine or mecholyle, which will produce micropapular whealing. Solar Urticaria is verified by testing with UVB, UVA and visible light. cold Urticaria is verified by a wheal response to the application of an ice cube to the skin or a test tube containing ice water. Autoimmune Urticaria is tested by the autologous serum skin test and determination of anti-FcR1 antibody. If urticarial wheals do not disappear in ≤ 24 h, urticarial vasculitis should be suspected and a biopsy should be done. [1,2]

Management :

There have been many therapeutic measures proposed by the modern medicine to treat (*Shara*) urticaria but none is universally acceptable. Moreover, urticaria may be a manifestation of an underlying disease, and in these cases, treatment of the underlying condition may be utmost important. One of the examples of a systemic condition that is commonly associated with chronic urticaria is autoimmune thyroid disease or Hashimoto's thyroiditis.[29] Other conditions that may be associated with urticaria are cryoglobulinemia and endocrine tumors. [30] A few reports have also suggested that *Helicobacter pylori* infection might be associated with chronic urticaria in some patients.[31,32] Therefore, the treatment regimen in urticaria should be tailored to the individual patient.

	Step1	Step2	Step3	Step4	Oral steroids
JTF	Antihistamine monotherapy	One or more: 1. Dose escalation of 2nd generation antihistamine 2. Add another 2nd generation antihistamine 3. Add H2 antagonist 4. Add leukotriene receptor antagonist 5. Add 1st generation antihistamine at bedtime	Dose advancement of potent antihistamine as tolerated	Add an alternative agent: 1. Omalizumab or cyclosporine 2. Other anti-inflammatory agents, immunosuppressants or biologics	Yes, short term (1–3 weeks)
EAACI	Modern 2nd generation antihistamine	Increase dosage up to fourfold of modern 2nd generation antihistamine	Add: Omalizumab or Cyclosporine A or Montelukast	N/A	Yes, short term (10 days)

Table 1: Comparison between JTF and EAACI Guidelines for Diagnosis and Management of Urticaria.

Drug therapy can be considered at various levels on the basis of severity of the disease and response to various administered medicines. The European Academy of Allergy and Clinical Immunology (EAACI) & Practice Parameters and American Academy of Allergy, Asthma & Immunology (AAAAI), Joint Task Force (JTF) guidelines are adapted for diagnosis and management of acute and chronic urticaria. A comparison between the two is shown in Table-1 [33]

Usūl-i 'Ilāj (Principle of Treatment) [34,35]:

- *Istifrāgh* (Evacuation)
- *Tanqiya-i Balgham* (Evacuation of phlegm)
- *Tanqiya-i Sawdā* (Evacuation of black bile)
- *Ta'dīl-i Dam* (Correction of sanguine)
- ❖ **'Ilājbi'l-Dawā' (Pharmacotherapy)** [35,36]
 - Oral administration of *Lu'āb-i Behīdāna* (*Cydonia oblonga*), *Shīra-i Unnāb* (*Zizyphus vulgaris*), *Shīra-i Sandal* (*Santalum album*) along with *Sharbat-i Nilofar*
 - Local application of mixture of *Roghan-i Gul*, vinegar and '*Arq-i Gulāb* on the body
 - Local application of paste of *Gerū* (Red earth) and *Phitkarī* (Alum)
 - Oral administration of decoction of the following drugs for *Tanqiya-i Balgham* in the dose of 10.5 g (if caused by phlegmatic vapours : *Halayla* (*Terminalia chebula*) 1 part, *Turbud* (*Ipomoea turpethum*) ½ part.

- Oral administration of *Gulqand* and *Sikanjabīn* along with '*Arq-i Gulāb* and '*Arq-i Mako*
- Local application of the paste of *Ārd-i Jaw* (flour of *Hordeum vulgare*), *Tukhm-i Karaf* (*Apium graveolens*) and vinegar
- *Joshānda-i Afīmūn*
- *Joshānda-i Halayla*
- Oral administration of powder of *Ajwā'in* (*Trachyspermum ammi*) 10.5 g and sugar 17.5 g to be taken in morning at empty stomach in the dose of 10.5 g
- Oral administration of *Itrīfal Shāhtra* (7–12 g) in morning at empty stomach or at bed time along with '*Arq-i Chobchīnī* (144 ml)
- Oral administration of *Itrīfal Afīmūn* (9 g) at bed time along with '*Arq-i Chobchīnī* (144 ml)
- Oral administration of '*Arq-i Shāhtra* (60–144 ml) [2] and *Qurs-i Kāfur* (3 g)
- ❖ **'Ilājbi'l-Tadbīr (Regimenal Therapy)** [34,35]
 - *Fasd-i Haft Andām* (Bloodletting through *Haft Andām*) [34]
 - *Hammām* (Bath)
- ❖ **Dietary Recommendations** [35,36]
 - *Mā' al-Jubn* (if caused by melancholic vapours)
 - Vinegar
 - Butter milk
 - Pomegranate juice

❖ **Dietary Restrictions** [10]

- Spicy and pungent diets
- Sweet dishes
- Meat

Conclusion

It is concluded that *Shara* (Urticaria) is a major health problem, which causes patient distress and impairment in quality of life. Antihistamines, corticosteroids and leukotriene antagonists are most prevalently used for curing urticaria in modern medicine. A complementary and integrative approach for (*Shara*) Urticaria which depends on balance of the four humors and temperaments. is the need of the hour, wherein, various single or combination of herbs and extracts can be used independently as well as along with allopathic drugs. Some polyherbal *Unani* formulations have been reported to show potential effect on (*shara*) urticaria. Presently there is need for exploration of these drugs based on modern scientific ethos.

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