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Unani perspective of *Buthūr Labaniyya* (Acne Vulgaris): A comprehensive review

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Abstract

Acne vulgaris (AV) is a prevalent skin condition affecting over 85% of adolescents and young adults, with prevalence ranging from 20% to 95% in Western countries. It is most common as early as ages 7-12 (preadolescent acne) and ends in the third decade of life and can lead to low self-esteem, shame, guilt, embarrassment, and stigma, resulting in psycho-social problems. Acne vulgaris is characterized by inflammatory and non-inflammatory Comedones lesions. Acne vulgaris, also known as "*Buthūr Labaniyya*" in Unani medicine, causes white pimple-like breakouts on the nose and face that resemble milk drops or frozen ghee. These eruptions are caused by "*Mādda sadidiyyah*" or pus-like morbid matter moving towards the skin for eradication, along with "*ghī bukhārāt*". Treatment aims to eliminate morbid matter, which is the root cause of the pathology. This review aims to demonstrate the overall concept, prevention and management of acne vulgaris in Unani system of medicine.

Keywords: Acne vulgaris, *Buthūr Labaniyya*, Unani medicine, comedones, sebaceous gland

Introduction

The skin is the largest organ and regulates body temperature, fluids, immune responses, and protection against ultraviolet radiation (UV radiation). Skin diseases affect 30-70% of the population, regardless of age or culture [1]. Acne is the eighth most common condition worldwide, affecting around 9.40% of people. Acne vulgaris is widespread among teenagers and young adults. Its prevalence rates are believed to vary from 35% to more than 90% among teenagers [2] and 40-60% of adults. Females, especially young girls, are more prone to acne [3]. According to the World Health Organization (WHO), acne affects the pilosebaceous units of the upper back, neck, chest, and face. At the onset of puberty, androgenic stimulation leads to the formation of excessive sebum and uneven follicular keratinization, along with the colonization of Propionibacterium bacteria and local inflammation [4]. According to Unani literature, *Buthūr Labaniyya* is derived from an Arabic word including two parts: *Buthūr*, which means boil, and *Labaniyya*, which means milk [5]. *Qarshī*, a well-known Unani physician, states that *Buthūr Labaniyya* is characterized as *Mutā'ddi* (an infectious) illness of the skin with tiny white eruptions on the cheeks, nose, and face. When it is pressed, it yields a cheesy substance [6]. According to *Ibn Sīnā*, *Buthūr Labaniyya* (Acne vulgaris/AV) is characterized by tiny white eruptions on the nose and cheeks that seem like condensed milk droplets. According to *Hakīm Ajmal Khān*, red eruptions might occur on the face, neck, cheeks, and nose. When they become mature, they discharge sticky substances and some pus [7]. Acne patients are more likely to experience Social instability, Low self-esteem, and Low confidence, all of which can lead to Anxiety, Depression, Obsessive-compulsive disorder (OCD), and Suicidal thoughts [8]. Conventional medicine treats it either pharmacologically or surgically. Pharmacological therapy involves both topical and systemic therapies [9]. Long-term use of these treatment procedures is commonly associated with side effects such as erythema, irritation, peeling, burning, dryness, and hair Bleaching; Isotretinoin has Teratogenic effects; and tetracycline causes stomach pain and diarrhea, among other things [10-12]. Unani system of medicine (USM) is one of the safest and oldest systems of medicine which offers an alternative and effective treatment for Acne vulgaris (AV) with no or minimal side effects as compared to the modern system of medicine.

Synonyms

Buthūr Labaniyya, also known as *Acne vulgaris* (AV) has been identified by several names worldwide.

- **Arabic:** *Buthūr Labaniyya*,^[13]
- **Persian:** *Buthūr Dohniyya*^[14]
- **Urdu:** *Muhāse, Dāne, Funsi*^[15]
- **Hindi:** *Kīl, Muhāse*^[16]
- **English:** *Acne*^[17], *Pimples*^[18]
- **Ayurveda:** *Yuvana Pidaka*^[19]
- **Sanskrit:** *Mukhadushika*^[20]

Historical Background

Acne has a long history, dating back to ancient Egypt, Rome, and the Elizabethan Era. Pharaohs in ancient Egypt sought to treat acne, with the Ebers papyrus describing honey and animal-based mixtures for treatment^[21]. In Rome, acne was treated with a simple sulfur solution in mineral baths. In the Elizabethan Era, women were used to applying layers of Venetian Ceruse, a thick white lead-based paint, to treat acne. In 1840, Fuchs divided acne into three types: *vulgaris*, *mentagra*, and *rosacea*. The term "Acne Vulgaris" was coined for the first time and has since become widely used^[22]. William and Bateman categorized acne into three types based on 'ionthoi' or 'vari': simplex, punctate, and indurate. Acne *rosacea* was initially thought to be a symptom of stomach or liver issues but was later categorized into *Acne vulgaris* (AV), *Acne mentagra* (AM), and *Acne rosacea* (AR). In the 1950s, tetracyclines were recommended, and in the 1960s, tretinoin was launched. In 1980, isotretinoin was launched in the US, but it had serious adverse effects. Laser treatment was introduced in 1990, and derma-rollers combined with micro-needling became a Nobel treatment approach for acne scars^[21].

Acne in Unani Medicine

Acne which means "point" or "peak," comes from an ancient Greek word. According to Aetius Amidenus, an ancient physician, mention of acne came in Greek historical texts. According to history, Hippocrates and Aristotle, the two greatest ancient Greek physicians, were aware of this ailment, and Aristotle gave a detailed explanation of the disease^[22]. *Thābit Bin Qurrah* (836-901 AD) has discussed numerous formulas for treating minor eruptions on the face in his treatise *Tarjama-i-Dhakhīra*^[23]. *Zakariyya Rāzī* (865-925 AD), in his book *Al Hawi Fi'l Tibb*, discusses the treatment of *Buthūr Labaniyya*, which causes acne on the face and nose^[24]. *Ali Ibn Hubal* (1122-1213 AD) In his book *Kitāb al-Mukhtārāt Fi'l Tibb*, & *Ibn Sīnā* (980-1037 AD) in *'Al Qānūn Fi'l Tibb'* defined the etiology and clinical presentation of *Buthūr Labaniyya*, as having the appearance of milk drops on the face and nose caused by morbid material directed towards the skin^[25, 26]. *Abu Al Hasan Al Jurjānī*, (12th century AD), In his gigantic compendium *Dhakhīra Khawārizm Shāhī*, discussed the etiology of breakouts on the skin surface^[27]. *Dāwūd Anṭākī* (1541 AD), also known as David of Antioch, in his historic treatise *'Tadhkira ūlī al-albāb'*, has revealed the humoral etiology of acne^[28]. *Akbar Arzānī* (1721 AD) and *Moḥammad A zam Khān* (1813-1902 AD) have eloquently explained the clinical manifestation of acne in their books *'Mīzān-al Tibb*, *'Tibb-i-Akbar'*, and *'Iksīr-i-Ā zam'*^[29-31].

Etiology: Several aggravating variables have been

mentioned, including food, menstruation, perspiration, Emotional stress, UV radiation, etc.^[38]. Use of drugs like lithium, steroids, and anticonvulsant; use of occlusive apparel such as shoulder pads, headbands, backpacks, and underwire brassieres; endocrine diseases including polycystic ovarian syndrome (PCOS); and even pregnancy have all been observed^[39]. The link between nutrition and acne can no longer be ignored. Compelling data demonstrates that High-glycemic-load (HGL) diets may aggravate acne also, the Low-glycemic-load (LGL) diet resulted in the treatment of acne lesions^[40-43]. Increased insulin levels stimulate androgen secretion and increase sebum production, sebaceous gland growth, and hyperkeratosis, which are most frequent in the pathogenesis of AV^[40, 44-46]. Dairy products cause an increase in insulin-like growth factor 1 (IGF-1) levels in plasma, leading to an increase in sebaceous cells and contributing to the development and growth of acne. It has less estrogen than cow milk. Acne has also been associated with impaired health-related quality of life (HRQoL), Uhlenhake *et al.* also found in the study that adverse stressors and psychiatric comorbidities were more prevalent in acne patients compared to non-acne patients. The study also found that stress and depression are positively related to acne severity. In neonates, acne may also occur, but in the majority of cases, it disappears spontaneously. Up to 20% of infants are affected by *Acne neonatorum* (AN), which develops in the first 4 weeks of life. In addition, there is a strong correlation between childhood acne and the development of persistent acne in adulthood^[47].

Pathophysiology

Acne has no known exact cause, yet several pathogenic processes, including blocked pilosebaceous orifices and elevated sebum excretion, appear to be at play^[11, 48, 49]. The pathophysiology is complex, with four major pathogenic variables including.

1. Increased androgens cause hyperkeratinization of the pilosebaceous duct, leading to Comedones formation.
2. Increased androgens increase sebum production from enlarged sebaceous glands.
3. Bacterial colonization and proliferation of ducts, most commonly *Propionibacterium* acne's caused inflammation.
4. *Propionibacterium* acne immunological activity triggers an inflammatory response^[50].

Effective regulation of the four pathogenic pathways involved in the formation of acne lesions^[51-55]. Androgens, insulin, and IGF-1 are the primary hormones that contribute to the development of AV. Other factors implicated in this process include Corticotrophin releasing hormone (CTRH), α -melanocyte-stimulating hormone (MSH), and substance P^[54]. Distended follicles burst, releasing pro-inflammatory chemicals into the dermis, causing inflammation. *propionibacterium* acne, *Staphylococcus epidermis*, and *Malassezia furfur* promote inflammation and follicular epidermal proliferation^[56].

Asbāb-i-Marq (Causes in Unani)^[13, 57-62]

- Excessive intake of Sweets and oily food items.
- Stress and anxiety.
- *Dhayābīṭus*.
- Excessive oil secretion from the skin.

- Unhygienic condition.
- Excessive intake of hot temperament foods.
- Indigestion.
- Blockage sebaceous gland.
- Teenage.
- More exposure to sunlight.
- *Sharāb* (alcohol).
- Emotional stress.
- *Imtilā-i-khūn Wa-hiddāt-i-Dam*.
- Intense humidity.
- *Ehṭebās-i-Tams* (amenorrhea).
- Family history.
- Environmental pollution.
- Use of oil-based soap and cream.
- *Qillat-i-Dam*.
- *Fasād-i-Dam*.
- Increased testosterone production.
- *Qābḍ* (Constipation).
- *Shiddat-i-Ḥarārat*: intense heat.
- Hemorrhoidal bleeding (*Khūn-i-Bawāsīr*) stops.
- Irregular menstrual cycle.
- Pregnancy.
- Dry fruits (*Maghziyāt*) such as peanuts, pista, *akhrot*, and *chilghoza* etc.

Etiopathogenesis in Unani medicine

As per the Unani system of medicine (USM), the majority of Unani physicians explained the etiopathogenesis of *Buthūr Labaniyya* in their treatises by citing suppurative substance (*Mādda-i-sadidiya*). Unani physician claims that *ṭabī ṭt* redirects pathogenic material (*Mādda-i-sadidiya*) from essential organs to the exterior ones. When the body accumulates too much noxious material, *ṭabī ṭt* attempts to remove the morbid material through the skin, resulting in swelling (*Awrām*) and papule (*Buthūr*) [32-34]. There are various kinds of boil and *Buthūr*. These swellings are divided into different categories based on whether humours (*Dam*, *Balgham*, *Ṣāfrā*, *Sawdā*) are involved, [35-37]. Can be referred to as *damwī*, *balghamī*, *Ṣāfrāwī*, or *sawdāwī* [35]. The temperature of these swellings might range from hot to cold. The intemperament (*Sū'-i-Mizāj*) of matter (*ḥārr khilt*) is the cause of hot (*ḥārr*) swellings. Hot swellings are categorized based on the type of morbid material present. disturbance of the bilious humor (*ḥamrā*) and the blood (*khilt dam*) as phlegmonous (*falghamūnī*) and erythematous (*ḥamrā*) respectively; their combinations are referred to as erythematous phlegmon (*ḥamrāfalghamūnī*) and phlegmonous erythema (*falghamūnīḥamrā*). Other swellings

that are not related to har are brought on by fluid, *rīh*, *balgham*, and *Sawdā* [36].

Risk factors

- **Age:** Acne may affect people of any age, although it is most frequent among teenagers.
- **Hormonal changes:** Hormonal effects from androgens and estrogens, such as DHEAS [dehydroepiandrosterone sulfate], which raises sebum production in teenagers are additional contributing factors [63].
- **Genetic factors:** Genetics significantly influences acne prevalence, with a positive family history increasing the chance of acne by 2.3% to 4.69% in France, China, and the UK [4, 64].
- **Diet:** Sebaceous gland function is influenced by DHT precursors and five alpha-reduced steroid hormones, with milk directly increasing IGF-1 levels, which are linked to acne in teens [65]. Acne is made worse by a high carbohydrate diet and reduced by eating a low-fat diet and including 30% more dietary fiber per day [4].
- **Socioeconomic factors:** Raza K. *et al.* found that acne is not common among healthy teenagers in Arequipa, Peru, according to a cross-sectional research. In another research, Wang PG *et al.* just 2.7% of school children in a Brazilian rural community, ages 6 to 16, had acne vulgaris [4, 66].
- **Smoking:** Smoking is a modifiable risk factor for acne, with a significant dose-dependent association [67].
- **Sweating and Exercise:** There is a short-term impact of exercise-induced acne [68].

Common sites

The majority of cases of acne (99%) are on the face, although it can also affect the back (60%) and chest (15%), albeit to a lower degree. Though it is usually an adolescent condition, acne affects 8% of people aged 25-34 and 3% of those aged 30-44 [12].

Clinical Presentation

This skin ailment is characterized by milk-drop-like eruptions on the face, forehead, nose, and arms [16, 25, 69]. Polymorphic comedones, papules, pustules, nodules, cysts, and scars are among the lesions associated with acne. Pyogenic granulomas and post-inflammatory pigmentation could also be present [70].

Classification [11, 71]

<p>Obstructive or Non-inflammatory lesions-</p>	<p>Closed comedones-(Whitehead) Pilosebaceous duct distended with thickened material. Diameter: 0.1-3.0 mm. Not covered by epidermis. Takes about five months to mature. Resolves within 3-4 days. 75% develop into inflamed lesions.</p>	<p>Open comedones-(Blackheads) Protrudes from the follicle, not covered by the epidermis. Starts with enlargement of the orifice by a darkly colored horny substance. Diameter of 5mm or more. Epithelial sac filled with keratin and lipids. Enzymatically active melanocytes present.</p>
<p>Inflammatory lesions:-</p>	<p>Pustule: Pustules are visible, purulent lesions. Initially solid, they liquefy and break down the comedones. The roof of the pustule breaks, allowing pus to escape. The fragments are expelled, and healing follows typical wound healing.</p>	

	<p>Papules: Comedone collapses result in deep-seated, long-lasting papules. Papules present superficially resolve in 5-10 days, leaving a small scar. Deep papules are more intense, take longer to resolve, and form scars.</p> <p>Nodule: Represents total disintegration of comedones. Often fused by adjacent comedones. Creates severe lesions.</p> <p>Cyst: Result of repeated punctures and re-encapsulation. Most prevalent on the trunk. Soft, fluctuant cysts that slowly enlarge over time. Thin epithelial wall can rupture by trauma. Ruptured cysts leave persistent abscesses.</p>
Acne Scars:	<p>Second most common symptom. Severest effect: permanent scarring.</p>

Acne Grading ^[72]

Grade	Severity	Clinical findings
1	Mild	Inflammatory acne includes papules, pustules, and open and closed comedones, caused by sebum clogging the pilosebaceous orifice. Oil accumulation can lead to bacterial growth, and mild acne is characterized by few or tiny pimples.
2	Moderate	Inflammatory lesions, often on the face, are characterized by erythematous, tiny papules, also known as "papules" or "pustules" filled with yellow pus.
3	Moderately Severe	Several papules and pustules over the chest and back, as well as sporadic inflammatory nodules
4	Severe	Severe acne cases involve painful, reddish nodules and numerous papules and pustules on the skin, potentially leaving scars.

Differential Diagnosis of Acne ^[70, 73]

1.	Bacterial folliculitis	AV and folliculitis are inflammatory erythematous papules, pustules, or nodules, presenting with sudden eruption, unpredictable dispersion, and spreading when scraped or shaved.
2.	Acneiform eruptions	Secondary to contrast dye, topical corticosteroids, systemic drugs, and cosmetics; may have a sudden onset and be correlated with exposure; improves with stopping the exposure.
3.	Favre-Racouchot	No inflammatory lesions; open and closed comedones on the peri-orbital and malar regions; patients are often elderly and have a history of extensive sun exposure
4.	Periorificial dermatitis	periorificial spread of pustules and papules; frequently made worse by topical corticosteroids usage
5.	Pyoderma faciale	Abscesses, cysts, rapid start of erythema, potential sinus tracts, and absence of comedones
6.	Drug-induced acne	Acneiform eruptions can be caused by antibiotics, exposure to halogenated aromatic hydrocarbons, medications like nystatin, isoniazid, corticotropin, naproxen, cyclosporin A, Antimycotics, gold salts, and interferon-beta.
7.	Miliaria	Heat rash, characterized by non-follicular papules, pustules, and vesicles, is a clinical diagnosis of Miliaria. Dermoscopy, particularly for darker skin, can show white globules with darker halos. A skin punch biopsy may aid in diagnosis.
8.	Pseudofolliculitis barbae	Chronic PFB, a condition linked to frequent shaving, affects men of subequatorial African descent and Indo-Europeans, with a large hereditary component.
9.	Rosacea	Rosacea, a condition affecting the skin, is most common in teenagers, causing acne, erythema, and telangiectasis, with blackheads, bumps, and pimples on the arms and trunk.

Psychological Impact of Acne

Apart from acne, other factors associated with acne scarring include low self-esteem, sadness, anxiety, poor interactions, changes in physical appearance, humiliation, irritability, and unemployment ^[74]. Psychological impacts significantly affect more females than males, according to research ^[75]. Psychiatric symptoms like somnolence, obsessions, sensitivities, hostility, paranoid thoughts, and psychosis have also been related to acne ^[76].

Management: Modern aspect

- General measures.
- Drugs-Topical therapy, Systemic therapy.
- Physical procedures.

General / non-drug management ^[63]

- Patient Counseling for Illness.

- Discuss illness course, treatments, and outcomes.
- Provide advice on preventing irritating lesions.
- Analyze the endocrine system for premenstrual syndrome.
- Advise against acne-causing oils, emollients, medications, or excessive makeup.
- Suggest a balanced diet, and avoid a glucose-rich diet.
- Regularly wash your face with soap and water.

Topical therapy ^[77-80]

A wide range of topical treatments are being used for the Anti-comedogenic and Anti-antibacterial effects.

Topical Retinoids

- Tretinoin: 0.025, 0.05, 0.1% gel/cream.
- Isotretinoin gel 0.05%.
- Adapalene: 0.03, 0.1% gel.

- Tazarotene: 0.1, 0.05% gel.
- Benzoyl Peroxide gel/cream.

Topical antibiotics ^[70, 81]

- Erythromycin.
- Clindamycin.
- Azelaic acid 10-20%.
- Salicylic acid.
- Oil of tea tree.
- Lactic acid.
- Picolinic acid 10%.
- Dapsone gel 5%.

Systemic therapy ^[70, 82]

- Tetracycline.
- Doxycycline.
- Minocycline.
- Lymecline.
- Sulpha drugs.
- Co-trimoxazole.
- Dapsone.
- Erythromycin.
- Hormonal therapy.
- Oestrogen 30µg along with progesterone.
- Anti-androgenic therapy: like Acetate Spirono-lactones.
- Corticosteroids - Prednisolone.
- zinc 200 mg daily.
- Oral retinoids like isotretinoin 0.1/ kg daily.

acne is aided by the porphyrins found in p-acne. Comedones and papules are significantly reduced following chemical exfoliation with 10-30% salicylic acid or 10-50% glycolic acid. Glycolic acid exfoliation is often necessary for cystic lesions and acne scars.

Uṣūl-i-'Ilāj (principles of treatment) ^[29, 31, 58, 59]

- Treatment of the main cause of disease.
- *Tanqiya* ' of *Balgham* from body.
- Systemic therapy by *Muṣaffi-i Khūn* advia.
- *Tajliya* ' [topical cleansing] by *jālī* advia (Detergent drug).
- *Tahlīl wa Tajfīf* (Resolution and Desiccation).
- Correct menstrual abnormalities.
- *Iṣlāh-i Haḍm* (Correction of digestion).

ILĀJ (Treatment)

It comprises of ' *Ilāj bi'l Tadbīr* (Regimenal Therapy).
' *Ilāj bi'l Ghidhā* ' (Dieto-therapy).
' *Ilāj bi'l Dawā* ' (Pharmacotherapy).

'Ilāj bi'l Tadbīr (Regimenal Therapy) ^[29, 31]

Tanqiya of body and head by.

- *Faṣd* of *Qifāl*.and vessels of the nose.
- *Ishāl*.
- *Istifrāgh balgham* from the body and brain.

Ilāj bi'l Dawā ' (Pharmacotherapy)

Mufrīd advia (single drugs) ^[87-95]

Photo-therapy ^[70]: UV radiation's effectiveness in treating

S. No.	Unani name	Scientific name	Actions
1.	<i>Chirchita</i>	<i>Achyranthes aspera</i>	Anti-androgen
2.	<i>Asgand</i>	<i>Withania somnifera</i>	Anti-bacterial, anti-inflammatory
3.	<i>Sambhalu</i>	<i>Vitex negundo</i>	Anti-oxidant, anti-inflammation, anti-androgen, anti-bacterial
4.	<i>Khus</i>	<i>Vetiveria zizanoides</i>	Refrigerant, detergent, anti-septic
5.	<i>Gilo</i>	<i>Tinospora cordifolia</i>	Blood Purifier, anti-oxidant
6.	<i>Halela</i>	<i>Terminalia chebula</i>	Anti-bacterial, anti-inflammatory, blood Purifier
7.	<i>Qust</i>	<i>Saussurea lappa</i>	Anti-inflammatory
8.	<i>Sumbul</i>	<i>Salmalia malabarica</i>	Anti-oxidant, anti-inflammation, anti-androgen, anti-bacterial
9.	<i>Iklyl aljabal</i>	<i>Rosmarinus officinalis</i>	Anti-oxidant, anti-bacterial
10.	<i>Gule surkh</i>	<i>Rosa damascus</i>	Anti-inflammatory, emollient
11.	<i>Asrol</i>	<i>Rauvolfia serpentina</i>	Anthelmintic, anti-inflammation, anti-bacterial
12.	<i>Babchi</i>	<i>Psoralea corylifolia</i>	Anti-bacterial
13.	<i>Kutki</i>	<i>Picrorrhiza kurroa</i>	Anti-inflammatory
14.	<i>Tukhm Khashkhash</i>	<i>Papaver somniferum L.</i>	Anti-bacterial, mild astringent, emollient
15.	<i>Zaitoon</i>	<i>Olea europaea Linn.</i>	Anti-inflammatory, demulcent, emollient
16.	<i>Baboona</i>	<i>Matricaria chamomilla Linn.</i>	Anti-inflammatory, resolvent, detergent
17.	<i>Masoor</i>	<i>Lens culinaris</i>	Anti-oxidant, anti-inflammation, anti-androgen, anti-bacterial
18.	<i>Ustukhuddus</i>	<i>Lavendula stoechas</i>	Ustukhuddus
19.	<i>Chameli</i>	<i>Jasminum officinalis Linn.</i>	Resolvent, detergent, anti-bacterial
20.	<i>Thunb. Irsa</i>	<i>Iris ensata</i>	Anti-inflammatory, resolvent, detergent
21.	<i>Ushba</i>	<i>Hemidesmus indicus</i>	Anti-bacterial, anti-inflammatory, blood Purifier
22.	<i>Aslussus</i>	<i>Glycyrrhiza glabra</i>	Anti-bacterial, anti-inflammatory,
23.	<i>Baobarang</i>	<i>Embelia ribes</i>	Anti-septic, anthelmintic
24.	<i>Nagarmootha</i>	<i>Cyperus rotundus Linn.</i>	Anti-inflammatory, resolvent, anti-septic
25.	<i>Haldi</i>	<i>Curcuma longa</i>	Anti-bacterial, anti-inflammatory
26.	<i>Muqil</i>	<i>Commiphora mukul</i>	Anti-bacterial
27.	<i>Gule ashrafi</i>	<i>Calendula officinalis</i>	Anti-bacterial, anti-inflammatory
28.	<i>Darchini</i>	<i>Cinnamomum zeylanicum Blume</i>	Anti-bacterial, deobstruent, absorbefacient
29.	<i>Jangli Jhau</i>	<i>Casuarina equisetifolia</i>	Anti-bacterial, anti-inflammatory, astringent
30.	<i>Chai Siyah</i>	<i>Camellia sinensis Linn.</i>	Anti-inflammatory, 5 α-reductase inhibitory
31.	<i>Kundur</i>	<i>Boswellia serrata Roxb.</i>	Anti-septic

32.	<i>Neem</i>	<i>Azadirachta indica</i>	Anti-bacterial, anti-inflammatory, blood Purifier
33.	<i>Anzroot</i>	<i>Astragalus sarcocolla Dymock.</i>	Desiccative
34.	<i>Haleeyoon</i>	<i>Asparagus officinalis Linn.</i>	Deobstruent
35.	<i>Chiraita</i>	<i>Andrographis paniculata</i>	Anti-oxidant, anti-inflammation, anti-androgen, anti-bacterial, blood Purifier
36.	<i>Elva</i>	<i>Aloe vera</i>	Anti-bacterial, anti-inflammatory
37.	<i>Piyaz</i>	<i>Allium cepa</i>	Anti-bacterial, anti-fungal

Compound formulations [59, 83-86]

- *Má jūn Ushba* 12g at bedtime
- *Qurs-i Mavīzi* 2 tab in the morning and *Mugarabi* 2 tab in the evening with water
- *Qurs-i Muṣaffī* (500 mg) 2 tabs TID
- *Itrīfal shāhtara* 7g BID
- *Má jūn Mundi* 5g BID
- *Má jūn chobchīnī* 5g BID
- *Joshānda* for *Muṣaffī Khūn advia* as *Shahitra* 4gms, *Chiraita* 4gms, *Sarfhuka* 4gms, *Gul Mundi* 4gms, *Unnab* 5 adad, *Shakkar* 6 gms.
- *Joshānda Aftimoon*.

Topical formulations [96]

- *Tiryāq muhasa*
- *Dawae buthūr labaniyya*
- *Ḍimād muhasa*
- *Ṭilā' muhasa*
- *Ḥabb-i-kalaf*
- *Dawa'-i muhasa*
- *Dawa'-i chuhara*
- *Ubtān ajeeb*

Topical therapy [29, 97]**Ubtān**

- Apply *Maghz-i-Ghongchī*, *Roghan-i kunjad* paste locally to the affected area overnight and wash it off the following morning.
- The paste, prepared by *Sīrkhām*, was applied locally, mixed with honey and vinegar.
- The paste, prepared by *Murdār Sang*, was applied locally and mixed with vinegar.
- The local administration of a paste made from powdered *khūbkalān*, *Sandal Safaid*, and *Sandal Surkh*, mixed well with rose water, is recommended.
- The paste, prepared with *Kaf-i Dariya* and *Zarnabad*, was mixed with water for local application.
- The paste, made from powdered *Post-i Darakht-i Saras* and *Kunjad Siyah*, is applied locally with vinegar.

Ḍimād (Paste) [24, 26, 29, 31]

- *Irsa*, *Gungchi safaid*, *Barg-i Neem*, *Post-i Saras* and *Namak-i Sāmbhar* in equal proportion
- *Salīkha* along with *Shahed* (Honey)
- *Shunīz*, *Bū'raq*, *Naushādar* along with *Sirka Safeedah* together with *Roghan gul*.
- *Kharbaq* 2 parts, *Bekh-i So'san* 1 part admixed with *Sirka*.
- *Al'si*, *Gule Surkh*, *Kalonji* together with *Sirka*.

Ṭilā' (Liniment) [29]

- *Ṭilā'-i Muhasa*
- *Ṭilā'-i Akbar*
- Fine powder of *Zubdat al-Bah'r (kaf-i Dariya)* 1part, *Badam talkh* 2 parts

- *Barg-i Neem*, *Bekh-i So'san*, and *Post-i Saras*
- *Murdārsang* 3.5g, *Sib'r Saqūtri* 17.5g, admixed with *Roghan gul* and *Sirka*.
- *Khāk'si*, *Sandal Surkh*, *Sandal Safaid* together with *Gulab*.

Aqrās (Tablets) [29]

Kaf-i Dariya 36g, *Tukm-i Turb* 36g, *Zarawand mudharaj* 36g, *Afsantīn* 6g, *Bekh-i So'san* 6g are powdered and made into tablets. The tablets, mixed with a small amount of water, are placed on the lesions.

Laṭūkh (Epithem) [25, 69, 96]

- *Anjīr* and *Shunīz* along with *Sirka*
- *Kharbaq* 1part, *Irsa* 1/2 part with *rogan-i Gul*

Ilāj bi'l Ghidhā' [13, 59, 98]

- Use of easily digestible foods (*Ghidhā' Sarī' al-Inhiḍām*) viz. soups and chapati.
- Use of Vegetables possessing cold properties (*Ghidhā' Bārid*).
- Use only *Ghidhā'-i-Sāda* (simple food items) like *Turai* (ridge gourd), *Kaddu* (pumpkin), *Palak* (spinach), *Shalgham* (turnip), *Mūng* (green gram), *Arhar* (split red gram), mutton, etc.
- Regular intake of fruits i.e. oranges, pomegranates, apples, and pears.
- Avoid *Radī'(waste)*, *Fasid* (Putrified), and *Nāfikh* (flatulent) *Aghdhiya* like *māsh ki daal* (black gram), *matar* (pea), *gobhi* (cauliflower)
- Avoid to *Sharāb* intake.

Conclusion

Acne vulgaris is a prevalent skin ailment that affects 90% of teenagers and can lead to psychological concerns such as despair and anxiety. Allopathy is a treatment strategy that involves benzoyl peroxide, retinoids, and steroids. However, long-term antibiotic treatment can result in antibiotic resistance, as well as renal and gastrointestinal issues. Acne vulgaris is well controlled in the Unani system using natural medications and therapy regimens that have little adverse effects. Systemic blood purifiers and topical Unani medicines are commonly used as treatments. Clinical trials are required to confirm their effectiveness in preventing and treating acne vulgaris.

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Conflict of Interest

No conflict of interest.

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References

1. Hay RJ, Johns NE, Williams HC, Bolliger IW, Dellavalle RP, Margolis DJ, *et al.* The global burden of skin disease in 2010: an analysis of the prevalence and impact of skin conditions. *Journal of Investigative Dermatology*. 2014 Jun 1;134(6):1527-1534.
2. Wolkenstein P, Machovcová A, Szepletowski JC, Tennstedt D, Veraldi S, *et al.* Acne prevalence and associations with lifestyle: A cross-sectional online survey of adolescents/young adults in 7 European countries. *Journal of the European Academy of Dermatology and Venereology*. 2018 Feb;32(2):298-306.
3. Alqahtani A, Alsaab WI, Altulahi B, Altulaihi B. Psychological impact of acne vulgaris on the young Saudi population. *Cureus.*, 2021 Dec 19, 13(12).
4. Raza K, Talwar V, Setia A, Katore OP. Acne: An understanding of the disease and its impact on life. *International Journal of Drug Development and Research*. 2012 Apr;4(2):14-20.
5. Arzānī MA. Mizān al-Ṭib. Kabiruddin T, editor. New Delhi: Idārā Kitāb al-Shifā; c2001. p. 24.
6. Ansari S. History of acne vulgaris and topical drugs in Unani medicine. *Archives of Medicine and Health Sciences*. 2019 Jul 1;7(2):293-297.
7. Anjum S, Tabasum A, Manzoor F, Faisal MU. Concept of Busoore Labaniya (Acne Vulgaris) and its Management In Light of Unani System of Medicine. *Journal of Drug Delivery and Therapeutics*. 2021 Oct 15;11(5-S):159-163.
8. Samanthula H, Kodali M. Acne and quality of life-a study from a tertiary care centre in South India. *IOSR Journal of Dental and Medical Sciences*. 2013 Mar;6(3):59-62.
9. Fox L, Csongradi C, Aucamp M, Du Plessis J, Gerber M. Treatment modalities for acne. *Molecules*. 2016 Aug 13;21(8):1063.
10. Golwalla AS, Golwalla SA. *Medicine for Students*. 22nd ed. Mumbai: Dr. AF Golwalla Empress Court; YNM. 927-928.
11. Khanna N. *Illustrated Synopsis of Dermatology and Sexually Transmitted Diseases*. 5th ed. New Delhi: RELX India Private Limited; c2017. p. 305-309.
12. Lone AH, Habib S, Ahmad T, Anwar M. Effect of a Polyherbal Unani formulation in acne vulgaris: A preliminary study. *Journal of Ayurveda and Integrative Medicine*. 2012 Oct;3(4):180.
13. Qarshi HM. *Jami' al-Ḥikmat*. Vol-2. Delhi: Idārā Kitāb al-Shifā Daryagunj; c2011. p. 1005.
14. Kabiruddin A. *Tarjuma Sharḥ Asbāb*. Delhi: Ajāz Publishing House; c2014. 243-244.
15. Ghulām J. *Makhzan-ī Ḥikmat*. Deoband: New Delhi: Ejāz Publishing House; c1996. p. 698-99.
16. Zakariyya A-R. *al-Hāwī Fi'l Tibb*. Vol. 23. Siddiqui HY, editor. Aligarh: Saba Publishers; c1994. p. 36-37.
17. Simon E. *Oxford Handbook of General Practice*. 1st Indian ed. New Delhi: Oxford University Press; c2006. p. 644.
18. Behl PN, Aggarwal A, Srivastava G. *Practice of Dermatology*. 9th ed. New Delhi: Satish Kumar Jain for CBS Publishers and Distributors; c2002. p. 353-359.
19. Ediriweera E. Clinical study on effect of paste of manjistadiya on yuvana pidaka (acne vulgaris). *Journal of Ayurveda and Holistic Medicine (JAHM)*, 2015, 3(1).
20. Sultana S, Shahnawaz, Ansari HA, Zulkifle M. Buthur-i-labaniyya (Acne vulgaris) with special reference to Unani Medicine: Review. *Journal of AYUSH: Ayurveda, Yoga, Unani, Siddha and Homeopathy*, 2015, 4(3).
21. Grant RN. The history of acne. [Unpublished manuscript].
22. Humyra T, Tanzeel A, Farzana A, Hina R. The historical panorama of acne vulgaris. [Unpublished manuscript].
23. Qurrah SI. *Tarjumae Zakheera Sabit Ibne Qurrah (Urdu Translation by Hakeem SA, Ali)*. Aligarh: Litho Colour Printers AMU; c1987. p. 33-34.
24. Razi AMBZ. *Al Hawi Fil Tib (Urdu Translation by Hakeem MY Siddiqui)*. Part-2. Vol-23. Aligarh: Saba Publishers; c1994. p. 36-37.
25. Ibne Sina AA. *AL Qanoon (Urdu translation by Kantoori SGH)*. Vol-II IV. New Delhi: Idara Kitab-ul-Shifa; c2007. p. 145-146, 1431-1432.
26. Baghdadi ABABH. *Kitabul Mukhtarar Fit-tib*. Vol-IV. New Delhi: CCRUM; c2007. p. 188-189.
27. Jurjani I. *Zakheera Khwarzam Shahi*. Vol-II X. Lucknow: Munshi Nawal Kishor. New Delhi. 1878;6:13-16, 45-49.
28. Antaki D. *Tazkirah Oolil Albab (Arabic)*. Vol-II. New Delhi: CCRUM, Ministry of Health and Family Welfare; c2010. p. 87.
29. Khān MA. *Iksīr-ī Āzam (Vol. IV)*. Lucknow: Matba' Nāmī, Munshī Nawal Kishor; 1917. 450-451, 511-512.
30. Arzani MA. *Mizanut-tib*. 4th ed. New Delhi: Idara Kitabul Shifa; c2002. p. 249.
31. Arzani A. *Tibe Akbar (Urdu Translation by Hussain M)*. Idara Kitabul Shifa; c2019. p. 722.
32. Mazhar HS. *The General Principles of Avicenna's Canon of Medicine*. New Delhi: Idara Kitab al-Shifa; c2007. p. 147.
33. Ibn Zohar Amam. *Kitabul Taiseer*. New Delhi: CCRUM; c1986. p. 193-94.
34. Razi ABMBZ. *Kitabul Fakhir Fit Tib*. New Delhi: CCRUM; c2005;1(1):37-38.
35. Jafri SAH, Siddiqui MMH. *Daqayaq-ul-Ilaj*. Vol. I (Urdu Translation). pp. 487-81.
36. Mazhar H. *The General Principles of Avicenna's Canon of Medicine*. Part II. New Delhi: Idara Kitab al-Shifa; c2007 May. p. 193-98.
37. Puri KC. *Moajiz-ul-Qanoon*. 3rd ed. New Delhi: Qaumi Council Barae Farogh Urdu Zuban; c1998. p. 439.
38. Eichenfield LF, Del Rosso JQ, Mancini AJ, Cook-Bolden F, Desai S, Weiss J, *et al.* Evolving perspectives on the etiology and pathogenesis of acne vulgaris. *Journal of Drugs in Dermatology: JDD*. 2015 Mar 1;14(3):263-272.
39. Keri JE, Rosenblatt AE. In process citation. *The Journal of Clinical and Aesthetic Dermatology*; c2008 Sep 1;1(3):22-26.
40. Kucharska A, Szmurło A, Sińska B. Significance of diet in treated and untreated acne vulgaris. *Advances in Dermatology and Allergology/Postępy Dermatologii i Alergologii*. 2016 Apr 2;33(2):81-86.
41. Reynolds RC, Lee S, Choi JY, Atkinson FS, Stockmann KS, Petocz P, *et al.* Effect of the glycemic index of carbohydrates on acne vulgaris. *Nutrients*. 2010 Oct 18;2(10):1060-1072.

42. Pappas A. The relationship of diet and acne: A review. *Dermato-Endocrinology*. 2009 Sep 1;1(5):262-267.
43. Nguyen QG, Markus R, Katta R. Diet and acne: An exploratory survey study of patient beliefs. *Dermatology Practical & Conceptual*. 2016 Apr;6(2):21.
44. Emiroğlu N, Cengiz FP, Kemeriz F. Insulin resistance in severe acne vulgaris. *Postepy Dermatol Alergol*. 2015;32:281-285.
45. Mishra JS, More AS, Kumar S. Elevated androgen levels induce hyperinsulinemia through an increase in Ins1 transcription in pancreatic beta cells in female rats. *Biology of Reproduction*. 2018;98:520-531.
46. Assaf HA, Abdel-Maged WM, Elsadek BE, Hassan MH, Adly MA, *et al*. Survivin as a novel biomarker in the pathogenesis of acne vulgaris and its correlation to insulin-like growth factor-I. *Disease Markers*. 2016;2016:7040312.
47. Uhlenhake E, Yentzer BA, Feldman SR. Acne vulgaris and depression: A retrospective examination. *Journal of Cosmetic Dermatology*. 2010;9(1):59-63. <https://doi.org/10.1111/j.1473-2165.2010.00478.x>.
48. Sams MW, Lynch PJ. Principles and Practice of Dermatology. 2nd ed. Churchill Livingstone Inc.; c1996. p. 801-10.
49. Colledge NR, Walker BR, *et al*. Davidson's Principles and Practice of Medicine. 21st ed. Churchill Livingstone, Elsevier; c2010. p. 1267-1268.
50. Liu PF, Hsieh YD, Lin YC, Two A, Shu CW, *et al*. Propionibacterium acnes in the pathogenesis and immunotherapy of acne vulgaris. *Current Drug Metabolism*. 2015;16:245-254.
51. Valente Duarte De Sousa IC. New and emerging drugs for the treatment of acne vulgaris in adolescents. *Expert Opinion on Pharmacotherapy*. 2019;20:1009-1024.
52. Aydemir EH. Acne vulgaris. *Turk Pediatri. Ars*. 2014;49:13-16.
53. Gollnick HP. From new findings in acne pathogenesis to new approaches in treatment. *Journal of the European Academy of Dermatology and Venereology*. 2015;5:1-7.
54. Cong TX, Hao D, Wen X, Li XH, He G, *et al*. From pathogenesis of acne vulgaris to anti-acne agents. *Archives of Dermatological Research*. 2019;311:337-349.
55. Yang JH, Yoon JY, Kwon HH, Min S, Moon J, *et al*. Seeking new acne treatment from natural products, devices, and synthetic drug discovery. *Dermatoendocrinology*; c2017.
56. Alexeyev OA, Dekio I, Layton AM, Li H, Hughes H, *et al*. Why we continue to use the name Propionibacterium acnes. *British Journal of Dermatology*. 2018;179:1227.
57. Jamal AM, Khan RM. Jild wa Tazeeniyat. New Delhi: Hidayat Publications and Distributors; c2021. p. 159.
58. Azhar M, *et al*. Therapeutic evaluation of a topical Unani formulation, Tīlā'-i Muhāsā in Buthūr Labaniyya (acne vulgaris): A randomized, controlled clinical study. *Cellmed*. 2020;10(2):1-9.
59. khān HA. Hāziq. New Delhi: Ruby Printing Press; c1987. p. 550-552.
60. Azmi AW. Moalijat (Amraz Jild wa Mutaalliqat-i-Jild). New Delhi: Supreme Offset Press. 2000;4:144-146.
61. Anonymous. cited on: 26 March 2015. Available from: <http://www.nhp.gov.in/busoor-i-labaniya-acne-vulgaris>.
62. Aleem S. Amraz-i-Jild. Aligarh: Saba Publishers; c2002. p. 74-78.
63. Kataria U, Chhillar D. Acne: Etiopathogenesis and its management. *Int. Arch Integr. Med Usha Kataria IAIM*. 2015;2(5):225-231.
64. Taylor M, Gonzalez MRP. Pathways to inflammation: Acne Pathophysiology. *Eur. J Dermatol*. 2011;21(3):323-333.
65. Kukova I, Danby FW, Ju Q, Wang X, Xiang LF XL, *et al*. New developments in our understanding of acne pathophysiology and treatment. *Exp. Dermatol*. 2009;18:821-832.
66. Xu SX, Wang HL, Fan X, Sun LD, Yang S, Wang PG, *et al*. The familial risk of Acne vulgaris in Chinese Hans - A case-control study. *J Eur. Acad. Dermatol. Venereol*. 2007;21(5):602-605.
67. Knutsen-Larson S, Dawson AL, Dunnick CA, Dellavalle RP. Acne vulgaris: Pathogenesis, treatment, and needs assessment. *Dermatol. Clin*. 2012;30(1):99-109. <https://doi.org/10.1016/j.det.2011.09.001>
68. Tom WL, Barrio VR. New insights into adolescent Acne. *Curr Opin Pediatr*. 2008;20:436-440.
69. Hubal I. Kitāb al-Mukhtārāt fi'l Tibb. Vol-2. New Delhi: CCRUM, Ministry of Health and Family Welfare; c2005. p. 188-189, 32.
70. Kang S, Amagai M, Bruckner AL, Enk AH, Margolis DJ, McMichael AJ, *et al*. Fitzpatrick's Dermatology. 9th ed. McGraw-Hill Education; c2019. p. 1391-1411.
71. Ralston S, Penman ID, Strachan MWJ, Hobson RP, Britton R, Davidson S, *et al*. Davidson's Principles and Practice of Medicine; c2014. p. 1417.
72. Kraft J, Freiman A. Management of acne. *CMAJ*; c2011. p. 183.
73. Nair PA, Salazar FJ. Acneiform Eruptions. [Updated 2018 Dec 2]. In: StatPearls. Treasure Island (FL): StatPearls Publishing; c2019 Jan. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK459207>
74. Mohiuddin A. A Comprehensive Review of Acne vulgaris. *J Clin. Pharm*. 2019;1(1):18-45.
75. Vilar GN, Santos LA, Sobral Filho JF. Quality of life, self-esteem and psychosocial factors in adolescents with Acne vulgaris. *An Bras Dermatol*. 2015;90:622-629.
76. Barratt H, Hamilton F, Car J, Lyons C, Layton A, Majeed A, *et al*. Outcome measures in Acne vulgaris: Systematic review. *Br J Dermatol*. 2009;160(1):132-136.
77. Cunliffe WJ, Poncet M, *et al*. A comparison of the efficacy and tolerability of adapalene 0.1% gel vs tretinoin 0.025% gel in patients with Acne vulgaris: a metanalysis of five randomized trials. *Br J Dermatol*. 1998;152:139.
78. Jain S. Topical tretinoin or adapalene in Acne vulgaris. *J Dermatolog Treat*. 2004;15:200-207.
79. Mills OH, Kligman JR, *et al*. Comparing 2.5%, 5%, and 10% benzoyl peroxide: Acne vulgaris. *Int. J Dermatol*. 1986;25:664-667.
80. Irajī F, Sadeghinia A, Siadat AH, Jalali S. Efficacy of topical azelaic acid gel in the treatment of mild-moderate Acne vulgaris. *Indian J Dermatol Venereol Leprol*. 2007;73:94-96.

81. Papadakis MA, McPhee SJ, Rabow MW. Current Medical Diagnosis & Treatment 2019. New Delhi; c2019. p. 131-32.
82. Khatoon F, Azahar M, Jabeen A, Uddin Q, Khan S, Md Moin S, *et al.* A comprehensive review of Buthūr Labaniyya (*Acne vulgaris*) with special references to the Unani System of Medicine. *J Phytopharmacol.* 2021;10(6):468-477. DOI: 10.31254/phyto.2021.10607.
83. CCRUM. Qarābādīn-ī Āzam wa Akmal. Translation U, editor. Delhi: CCRUM, Ministry of Health and Family Welfare; c2005. p. 7.
84. CCRUM. Anonymous. NFUM. Part-1. Delhi: Ministry of Health and Family Welfare, Govt. of India; c2006. p. 96-124.
85. Azam Khan. Rumūz-i Āzam. Vol-2. New Delhi: CCRUM; c2006. p. 382-84.
86. Khan A. Muhīṭ-i Āzam. Vol-2. New Delhi: CCRUM, Ministry of Health and Family Welfare; c2012. p. 385-388.
87. MG, Farhana B, Kulkarni S. Effectiveness of herbal medication in the treatment of *Acne vulgaris*. *The India Practitioner.* 2001;54(10):723.
88. Kumar SM, Chandrasekar MJN, Najan MJ, Suresh B. Herbal Remedies for Acne. *Natural Products Radiance.* 2005;4(4):328-334.
89. Parveen S, Zafar S, Qureshi MA, Bano H. Clinical trial of Unani herbomineral cream to evaluate its topical effects on *Acne vulgaris*. *Indian Journal of Traditional Knowledge.* 2009;8(3):431-436.
90. Mahmood T, Akhtar N, Khan BA, Khan HM, Saeed T. Outcomes of 3% green tea emulsion on skin sebum production in male volunteers. *Bosn J Basic Med Sci.* 2010;10(3):260-264.
91. Shafiq Y, *et al.* Anti-acne activity of *Casuarina equisetifolia* bark extract: A randomized clinical trial. *Bangladesh J Pharmacol.* 2014;9:337-341.
92. Chaudhary SS, Tariq M, Zaman R, Imtiyaz S. The *in vitro* anti-acne activity of two Unani drugs. *Anc. Sci. Life.* 2013;33(1):35-38.
93. Nand P, Drabu S, Gupta RK. Phytochemical and antimicrobial screening of medicinal plants for the treatment of acne. *Indian Journal of Natural Products and Resources.* 2012;3(1):28-32.
94. Rafieian-Kopaei M, Shahinfard N, Rouhi-Boroujeni H, Gharipour M, Darvishzadeh-Boroujeni P. Effects of *Ferulago angulata* extract on serum lipids and lipid peroxidation. *Evid Based Complement Alternat Med.* 2014;2014:2014.
95. Ansari S. History of *acne vulgaris* and topical drugs in Unani medicine. *Arch Med Health Sci.* 2019;7:293-297.
96. Razi A. Kitāb-al Fākhir Fit Tib. Part-1, Vol-1. New Delhi: Ministry of Health and Family Welfare India; c2005. p. 37-8, 28, 46.
97. Jeelani G. Makhzane Hikmat. Vol-2. New Delhi: Ejaaz Publications; c1996. p. 689.