

## Comparative Review of Unani System of Medicine and Modern Perspectives on Otorrhoea (Sayalān al-Udhun)

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**Abstract:** The term otorrhoea originates from the Greek words *otos*, meaning "ear," and *rhein*, meaning "discharge." Similarly, the Unani term *Sayalān al-Udhun* is derived from the Arabic words *Sailan*, meaning "discharge," and *Udhun*, meaning "ear." Renowned Unani scholars have defined otorrhoea as *Sayalān al-Udhun*, describing it as a condition characterized by a burning sensation in the external auditory canal, accompanied by continuous ear discharge. Otorrhoea, the discharge from the ear, is a common symptom associated with various ear disorders such as otitis media, otitis externa, and tympanic membrane perforations. This condition is particularly common in children and individuals with a wet temperament (*Mizāj/Raṭb*). According to Unani principles, otorrhoea often occurs in individuals with an excess of bodily fluids (*Akhlat*) and a phlegmatic temperament (*Balghamī al-Mizāj*). The symptoms include *Waja' al-Udhun* (ear pain or otalgia), *Izdiyad-e-Hararat* (increased body heat), a sense of fullness in the ear, stabbing pain in the temples, and pressure buildup in the ear. In Unani medicine, treatment for otorrhoea includes systemic and local approaches. Systemic remedies often involve the use of blood purifiers (*Muṣaffī-i-Dam*), anti-inflammatory agents (*Muḥallil*), analgesics (*Musakkīn*), and antimicrobial agents (*Dāfi'-i-Ta'affun*). Locally, treatments include drying agents (*Mujaffif*) applied through methods such as fumigation (*Tadkhīn*) and insufflation (*Nafūkh*). This review explores the understanding, diagnosis, and treatment approaches to otorrhoea from the perspectives of Unani and modern medicine.

**Keywords:** Otorrhoea, *Sayalān al-Udhun*, Unani and Modern concept

## Introduction

The term "otorrhoea" originates from the Greek words "otos", meaning "ear," and "rhein", meaning "discharge."<sup>1</sup>

The term Sayalān al-Udhun is derived from the Arabic language, where "Sailan" refers to "discharge," and "Udhun" signifies "ear," collectively describing the condition involving ear discharge.<sup>2,3</sup> Otorrhea is defined as drainage of aqueous material from the ear. Otorrhea has several causes, including disease of the middle ear, perforation of the tympanic membrane, or pathology of the outer ear canal.<sup>4</sup> In modern medicine, it is regarded as a symptom rather than a distinct disease, whereas in Unani medicine, it is viewed within the framework of a disease condition. Unani scholars have defined the otorrhea under the name of sailan ul Udhun and explained that this disease occurs most commonly in children and people having wet temperament. In children it heals by itself at the age of 12- 13 years but continuous discharge results in weakness of brain.<sup>5</sup> Sayalān al-Udhun can sometimes occur frequently and affect hearing, making it one of the most challenging conditions to treat using conventional methods. Therefore, I explored Unani literature to investigate its management, as discussed in this review paper.

### Types and features of ear discharge<sup>6,7,8,13</sup>

- Serous: Eczematous otitis externa (OE)
- Sanguineous (blood tinged): ASOM, granulations, trauma, tumors
- Putrid (foul smelling): Cholesteatoma Watery:
- Watery otorrhea, which may be copious, subtle or intermittent, suggests a cerebrospinal fluid (CSF) leak
- Purulent discharge: usually signifies an underlying bone eroding process in the middle ear like cholesteatoma.
- Mucopurulent discharge: is commonly due to benign chronic suppurative otitis media and the extension of the disease process to mastoid air cells.

### Etiology(Asbāb of sailan ul Udhun)<sup>5,9,10</sup>

- According to Unani literature, the causes of Sayalān al-Udhun (otorrhoea) are described as follows:
- Sardi ka lagna (Extreme cold).
- NazlaMuzmin (Chronic cold).
- Exposure of head in cold environment,
- Trauma on the ear.
- Dental infections.
- Foreign body.
- Maggots in the ear.
- Earwax
- Warm-e-Simakh-ul-Udhun (otitis externa).
- Balgham ki ziyadti (Excessive phlegm)

**Causes of otorrhea in modern system of medicine mentioned below<sup>6,8,11,13</sup>**

**Conditions Affecting the External Auditory Canal:**

- Infections: Otitis externa (OE), otomycosis, and furunculosis.
- Obstructive Disorders: Keratosis obturans.
- Severe Infections: Malignant or necrotizing otitis externa.
- Skin Conditions: Acute dermatitis, including seborrheic and eczematous types.
- Adjacent Involvement: Parotid abscess.
- Structural Abnormalities: Canal cholesteatoma.
- Tumors: Neoplasms such as ceruminoma and malignant lesions.

**Factors Predisposing to Secondary Otitis Externa:**

- Ear Canal Conditions: Osteomas, exostoses, canal dehiscence into the mastoid or glenoid fossa.
- Associated Ear Disorders: Otitis media with perforation, allergy to ear drops.

**Tympanic Membrane Conditions:**

- Presence of granulation tissue or granular myringitis.
- Bullous myringitis.
- Retraction pockets or cholesteatoma formation.

**Middle Ear and Mastoid Conditions:**

- Acute or chronic suppurative otitis media (ASOM, CSOM) and mastoiditis.
- Cholesteatoma.
- Granulomatous diseases or neoplasms.

**CSF Otorrhea:**

- Temporal bone fractures.
- Defects in the tegmen.
- Cochlear deformities.
- Hyrtl's disease.

In children, the most common causes of ear discharge are ASOM and CSOM while in adults they are CSOM and OE.

**Clinical Features (Alamat)<sup>12</sup>**

- Ear pain or discomfort (Waja-ul-Udhun)
- Elevated body temperature (Izdiyad-e-Hararat)
- Vertigo or dizziness (Duwār)
- Sensation of fullness in the ear
- Sharp, stabbing pain in the temples
- Pressure buildup in the ears

**Diagnosis<sup>6,14,15</sup>**

- History
- Physical Examination

- Investigation

### History

- **Onset and Duration:** Identify if the condition is acute or chronic.
- **Nature of Discharge:** Assess if the discharge is clear, mucoid, purulent, bloody, or pulsatile.
- **Preceding Events:** Consider any history of trauma or upper respiratory infections (URI).
- **Accompanying Ear Symptoms:** Include ear pain (otalgia), itching (pruritus), hearing loss, or vertigo.
- **Medical History:** Review past conditions such as dermatological diseases, otitis media or externa, and any neurotological issues or ear surgeries.

### Physical Examination (Microscopic Ear Examination and Cleaning)

- **External Auditory Canal:** Evaluate for edema, inflammation, granulations, polyps, or abnormal growths.
- **Foreign Body:** An unanticipated foreign object may be discovered.
- **Stenosis:** Chronic or resistant otitis externa (OE) can lead to narrowing of the external auditory canal (EAC).
- **Tympanic Membrane:** Check for perforations, granulations, de-epithelialization, presence of a myringotomy tube, retraction, or signs of cholesteatoma.
- **Tuning Fork Tests:** Assess for conductive or sensorineural hearing loss.
- **Systemic Examination:** Look for neurological deficits or indications of associated systemic conditions.

### Investigations

- **Audiometric Testing:** To evaluate hearing levels and identify hearing loss.
- **Tympanometry:** To assess middle ear function and detect abnormalities.
- **Culture and Sensitivity:** For identifying pathogens and guiding appropriate treatment.
- **Chemical Analysis:** Testing for glucose and chloride levels to confirm cerebrospinal fluid (CSF) presence.
- **CT scan:** To provide detailed imaging of ear structures and surrounding areas.
- **Biopsy:** For histopathological examination to diagnose tissue abnormalities.
- **Immunodeficiency and Allergy:** Underlying immunodeficiency or allergies should be evaluated in cases that are unresponsive to treatment.

### Management in Modern Medicine

Treatment begins after identifying the underlying cause of otorrhea. It may involve antibiotics, topical steroids, and regular ear cleaning. Aminoglycoside ear drops are avoided due to their ototoxic effects. In cases of CSF otorrhea, ear drops are not prescribed, as they may enter the cranial cavity.<sup>6</sup>

**Medical<sup>6,16</sup>**

**Topical isopropyl alcohol:** In healthy ears, it can help dry minimal serous otorrhea.

**Pre-existing perforation and grommet:** Water should be kept out of the ear. A brief course of topical antibiotics is usually effective in managing otorrhea. Proper drainage may require tube removal and repeated debridement.

**Acute Otitis media:** Systemic antibiotics are recommended, while topical antibiotics help prevent secondary otitis externa. In resistant cases, the antibiotic is adjusted based on culture and sensitivity results.

Hot compresses or hot water bottle is also useful.

**Surgical<sup>6,15</sup>**

**Cholesteatoma and neoplasms:** Surgery is indicated in these cases.

Surgical intervention may be necessary if otorrhea is caused by chronic suppurative otitis media (CSOM), polyps, or tumors.

**Unani Management of Otorrhea (Sailan-Ul Udhun)**

❖ **Uṣūl-i-‘Ilāj(Principal of Treatment)** In the Unani system of medicine, the core principles of treatment (Uṣūl-i-‘Ilāj) focus on:<sup>12</sup>

- Removing the underlying cause
- Cleansing the external auditory canal with water infused with boiled neem leaves.<sup>9</sup>
- Administering antiseptic medications (Dāfi‘-i-Ta‘affun) for otorrhea of infectious origin
- Administration of potent analgesics (Musakkin) for pain relief.
- Administration of Anti-inflammatory (Muḥallil Awrām Advia)

❖ **‘Ilāj(treatment)**

Treatment is generally carried out through following fundamental methods:

‘Ilājbi’l Tadbīr(regimenal therapy), ‘Ilājbi’l Taghdhiya (dietotherapy), ‘Ilājbi’l Dawā’(pharmacotherapy), and ‘Ilājbi’l Yad(surgical intervention)<sup>17,18,19</sup>

❖ **‘Ilājbi’l Tadbīr(regimenal therapy)**

• **Fumigation (Tadkhīn):**

- It can be done using Murmakki, Elwa, and Kundur. Along with this, steam inhalation can be provided using a decoction made from Podina (mint), Barghe Neelgiri(eucalyptus), Biranasif, and Gule Banafsha, taking 10 grams of each ingredient<sup>14</sup>.

• **Insufflation (Nafūkh):**

- A fine powder made from Rasot (Berberis aristata), MurMakki (Myrrh), Kundur (Frankincense), Phitkari(Alum), and Suhaga (Borax) can be gently insufflated into

the external ear canal, but only when the eardrum is intact and no perforation is present<sup>20</sup>.

❖ ‘Ilājbi’l Taghdhiya(dietotherapy)

- A simple, balanced, and easily digestible diet is recommended—dietary substance producing humours of good quality in body (Ghidhā’ Jayyid al-Kaymūs), diet producing fine/thin consistency humours (Ghidhā’ Laṭīf), and easily digestible diet (Ghidhā’ Sarī’al-Inhiḍām).
- Avoid moist or heavy foods (Ghidhā’ Rathb).
- Stay away from foods that can increase mucus or phlegm formation<sup>21</sup>.

❖ ‘Ilājbi’l Dawā’(pharmacotherapy)

- If there is ear pain, perform Inkibābusing a decoction made from Poste Khashkhash and Nakhoona
- If the cause lies in the external ear, apply cauterization using agents like Murmakki, alum, or Suhaga.
- “If the cause is ASOM, prescribe Qurse Asfar (2 tablets), Habbe Shifa (1 tablet), and Dayaqoozq (3 g) twice daily—morning and evening—along with local applications. Additionally, a decoction prepared with Ustukhudoos (5 g), Shahatra (3 g), Chiraita (3 g), Gule Mundi (3 g), Unnab (5 pieces), and Gule Banafsha (5 g), combined with Khamira Khashkhash (5 g), may be given in the morning<sup>14</sup>.

❖ ‘Ilājbi’l Yad(manual therapy/surgery)

- If the condition is due to chronic suppurative otitis media, medical treatment offers limited benefit, and surgical management (‘Ilājbi’l Yad) is recommended.
- If polyps or tumors are present, surgical intervention is also recommended<sup>15</sup>.

## Discussion

Otorrhoea (Sayalān al-Udhun) is a common clinical condition described extensively in both Unani and modern medical literature. The present review highlights that Unani scholars recognized this condition centuries ago and explained its association with excess rutubat (moisture), phlegmatic temperament, and pathological processes such as warm (inflammation) and nazla (catarrh). Modern medicine similarly attributes otorrhoea to infections of the external or middle ear, chronic otitis media, cholesteatoma, trauma, and cerebrospinal fluid leak.

The comparison reveals several points of convergence. The Unani description of Balgham ki ziyadti (excess phlegm) correlates with mucopurulent or serous discharge seen in otitis media. The emphasis on temperament (mizaj) aligns with the observed predisposition of children and individuals with moist constitutions to otorrhoea. Moreover, Unani physicians recognized the complications of chronic discharge, including weakness of the

brain and hearing loss, which are consistent with modern findings related to chronic suppurative otitis media.

Treatment approaches also show overlap. Unani management stresses regimenal therapy (Ilājbi'l Tadbīr), pharmacotherapy ('Ilājbi'lDawā'), diet regulation, and surgical intervention, mirroring modern dependence on topical therapy, systemic antibiotics, and operative measures. Unani fumigation (Tadkhīn), insufflation (Nafūkh), and drying therapies demonstrate antimicrobial and astringent effects—concepts supported by contemporary studies of herbal medicine. The Unani principle of removing the underlying cause is analogous to modern etiological treatment strategies.

Overall, this study indicates that Unani management of Sayalān al-Udhunis holistic, addressing systemic imbalance, local pathology, and recurrence prevention. Integrating Unani modalities with modern diagnostic tools may offer a safer, cost-effective, and patient-centred approach to otorrhoea management.

## Conclusion

Sayalān al-Udhun (otorrhoea) is a well-recognized condition in Unani medicine, with detailed descriptions of its causes, clinical features, and treatment. Both Unani and modern literature affirm that otorrhoea is primarily a symptom of underlying ear pathology that requires timely and appropriate management. Unani principles emphasize restoring temperament balance, eliminating morbid matter, and providing local therapy through fumigation, insufflation, and herbal formulations. These methods, combined with diet regulation and surgical intervention when needed, form a comprehensive management strategy.

This review concludes that Unani medicine offers effective and holistic approaches that may complement modern otolaryngological care, especially in chronic or recurrent cases. Further clinical research is needed to scientifically validate and standardize Unani treatment protocols for broader clinical application.

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