Definition, Treatment and Special Role of Catarrh in Perspective of Traditional Persian Medicine

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Received: 21 Jan 2018 Revised: 15 Mar 2018 Accepted: 28 Mar 2018

Abstract

Catarrh is a common problem everyone experiences many times in his lifetime. According to Traditional Persian Medicine (TPM), Catarrh is related to the terms: “Zokam” and “Nazleh”. Zokam is defined as drainage of secretions through the nasal passage and Nazleh is defined as flow of them into the posterior nasal space and the oropharynx; Nazleh flows can also spread to the lungs, esophagus, stomach and some other organs and cause various complaints. Medieval Iranian physicians had paid special attention to appropriate treatment of Nazleh because they believed that it is the source for many chronic diseases. According to the organ affected by Nazleh various diseases were expected from head to toe. Despite the great advances in medical treatments in recent years, effective drugs are still needed to control the clinical manifestations of catarrh. Drug resistance and the complications of the drugs make this requirement more apparent. Some of the herbs that were prescribed by former physicians have indicated concomitant therapeutic effects in recent researches so it seems that some components of the herbs can be beneficial in producing new drugs. It is hoped that a review on therapeutic methods of TPM will prompt further clinical benefits.

In this study, we reviewed several valuable TPM text books and collected the master viewpoints about etiology, semiology and treatment of Catarrh (Zokam and Nazleh), then we searched through some scientific databases including PubMed and Google Scholar to match the findings with the new researches. The aim was to express the importance of these complaints and suggest convenient methods to treat them; considering that preventing and treating of some chronic diseases may relate to proper approach to Nazleh.

Keywords: Catarrh, Postnasal drip, PND, Traditional Persian medicine, Zokam, Nazleh

Citation: Jafari Z, Saffarshahroodi A, Oveidzadeh L, Emtiazy M. Definition, Treatment and Special Role of Catarrh in Perspective of Traditional Persian Medicine. Trad Integr Med 2018; 3(2): 91-105.

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Introduction
Catarrh is a common complaint everyone experiences many times in his lifetime. In medical literature postnasal drip (PND) is a common term that describes the condition as a feeling of something dripping down the throat or the presence of mucoid secretions in the nasopharynx and oropharynx. The diagnosis of the postnasal drip syndrome (PNDS) is based on the medical history and clinical examination; although some physicians consider a therapeutic response to a decongestant or antihistamines as a criterion too. The syndrome may also overlap with chronic unexplained cough, rhino-sinusitis or even esophageal reflux [1-3].

According to Traditional Persian Medicine (TPM), Catarrh is related to the terms: “Zokam” and “Nazleh”. Zokam is defined as drainage of secretions to the nose and Nazleh is defined as flow of them into the posterior nasal space and the oropharynx; secretions may also flow down to the lungs, esophagus, stomach and some other organs [4-12].

There is a widespread range of significant complications depending on the organ which accepts the Nazleh flows. Thus, it seems that we should have a proper and exact approach to such a simple disease and maybe we would find the inflection point to prevent, manage and treat many chronic diseases which relate to these strange flows.

Methods
In this review study we studied the etiology, semiology and treatment of Catarrh in several valuable TPM sources including Zakhire Kharazmshahi [12], Moalejat-e-Aghili [9], Sharh Al-Asbab va Al-Alamat [10], Kholase Al-Hekmah [8], Al-Qanon fi Al-teb [5], Kamel Al-Sanaat Al-Tebbieh [7], Teb-e-Akbari [11], Exir-e-Azam [6], Al-Mansoori fi Teb [4], Bahr Al-Javaher [13] and Al-tanvir [14]. Our traditional words for extracting the first results were “Zokam” and “Nazleh”- synonymous with catarrh - according to Ghamoos al-Qanon [15] which is a dictionary to match ancient words with Latin equivalents.

We also searched in PubMed and Google Scholar databases with the keywords: Postnasal drip, PNDS and Catarrh to make a connection between the traditional and new findings. On the next step, disease types were classified based on the etiology and appropriate treatment mentioned for each group. Moreover the recommended therapeutic herbs were searched for new researches.

Findings
Definition of Catarrh (Nazleh and Zokam) in TPM:
According to the most of TPM text books and the viewpoint of master medieval physicians such as Avicenna and Rhazes, Zokam is drainage of secretions through the nasal passage and Nazleh is flow of them into the posterior nasal space and the oropharynx; secretions may also flow down to the lungs, esophagus and stomach [4-12].

They believed that Zokam and Nazleh are both originating in the brain. They have emphasized on such a brain cell disorder as the cause for Catarrh. It means that the cells are not capable of using nutrients so these substances excrete to
the inferior tract of the brain and flow down as Catarrh through a connection between the brain and nasopharyngeal space. These comments match the new scientific findings about the formation of the cerebrospinal fluid (CSF) and the existing communications between the brain and sinuses [2]. This process can be considered as one of the mechanisms for Nazleh formation.

**Etiology of Zokam and Nazleh**

As described in the conventional medicine, increase in the sinuses and nasal epithelial cell secretions in contact with allergens or any abnormal factors are thought to be the cause of Catarrh. But physicians of TPM believed that the main substance in Catarrh originates from the brain and Catarrh is more than a simple epithelial cell discharge; although these discharges are considered as a component for Catarrh [2]. This theory matches the new scientific researches about the formation of the cerebrospinal fluid (CSF), the CSF role in the brain extracellular clearance and the communications in which the fluid passes to the cranial sinuses. It is demonstrated that some metabolites derived from the brain cells metabolism take part in CSF formation in lateral ventricles, then the CSF cycles through the third and forth ventricles and exists to the subarachnoid space [16,17]. A substantial portion of subarachnoid CSF cycles through the brain interstitial space and takes part in the clearance of the interstitial solutes. It means that CSF enters the parenchyma along paravascular spaces surrounding the penetrating arteries and is cleared along paravenous drainage pathways [18]. Some CSF enter the bloodstream through the arachnoid villi and some components enter the cranial sinuses through the lymphatic vessels of the upper wall of the sinus, then they mix with the epithelial cell secretions and flow into the nasopharyngeal space [18,19]. Therefore, we can consider the metabolites of the brain cells that result from the metabolism of these cells, or, in other words, their temperament, as a constituent substance for Catarrh and CSF flow seems to be an exemplified of the Nazleh flows.

The etiology of Nazleh and Zokam has been expressed in different categories in TPM texts [6,8,11,12,20,21] but the outcome is likely the same. The physicians of TPM have classified Catarrh as warm and cold, each type with specific cause and special manifestations. Since these physicians have considered such a brain cell malfunctioning to be effective in creating Catarrh, they have expressed the factors affecting the brain in the following categories:

1) **External heat:** like exposure to sunshine, embrocate the head with hot-natured oils and smell of hot fragrances such as saffron and musk.

Such options cause warm Catarrh so the patient would experience watery discharge of nose and dry throat in the first stages, desire to drink water and cold liquids [9,10], itching and irritating
nose [22], eye and nose redness (in some patients) and slight redness of skin. Fever is not necessarily present in all the patients, but if exists would exacerbate the ailment [9, 10].

2) Hot temperament of the whole body or the brain
These also cause warm Catarrh with the same signs as the first kind; changes in the pulse and the urine color which shifts to yellow would also appear [9,10].

3) External cold which affects the brain and leads to dystemperament: like exposure to cold weather. It would have a greater influence on the brain especially after taking bath, doing physical activity, intellectual work, anger or abundant phlebotomy [9,10].

The coldness would slow down the cells metabolism so the nutrients which come to the brain cannot be applied as competent and they become waste and should be washed out.

These patients would have cold catarrh with such signs as head heaviness and white compact discharge of the nose and the pharynx. Having fever together with this type would result in faster remission [9,10].

4) Cold temperament of the brain: For example in elderly [5].
Due to slow metabolism the brain is not capable of using nutrients competently so we would expect waste materials that have to be removed.

If they are cleaned up regularly we would anticipate a continuous Catarrh for the patient [9] but if the waste remains there, various diseases such as stroke, epilepsy and drowsiness will be expected [12].

In this condition, the patient would experience cold Catarrh with the signs of blurred sense, head heaviness, headache and tension in the forehead. Keeping the head warm, would be helpful for these patients [9,10].

5) Repletion of the whole body and the brain
According to TPM bases, we have four types of humors; in digestive system foodstuffs will transform and become humors. Any abnormality or imbalance of these humors would cause diseases. We have four types of humors: blood or “Dam”, phlegm or “Balgham”, yellow bile or “Safra”, and black bile or “Sauda”; each type possesses a special quality [21] so due to the predominant humor we would expect various signs.

5-1) Yellow bile predominancy
The patient would experience warm discharge (This quality sometimes results in ulcers in the nose and phyltrum), yellow discharge, warm breath, irritated and tearful eyes, flushed face, thirst and headache [9,10].

5-2) Blood predominancy
The patient would have warm Catarrh and also the following features: red eyes, dizziness, desire to sleep but insomnia, itching in the uvula, gums, ears and the face, bloody discharge of the nose, sweetness and sometimes unpleasant taste of the mouth [9,10].

5-3) Phlegm predominancy
This type is the safest one [9,10]. Phlegm is the most suitable humor to feed the brain due to similar temperament.
The patient would have cold Catarrh and also the following signs: head heaviness, blurred sense, nasal speech, excessive humidity in the mouth, disability to find out the taste of foods and drinks and repeated bites on the tongue during sleep and eating [9,10].

5-4) Black bile predominancy
This type appears less than others do. Black bile is the least humor in the body, and it has the converse temperament besides the brain [10], so melancholic diseases rarely happen in the brain. This kind would result in cold Catarrh and also dry eyes, head heaviness, headache, unpleasant taste of the mouth (it seems like a burnt material is kept in the mouth), have a conception of smoke or stench while smelling things [9,10].

**Complications**
According to the previous classification, we can consider two types of Catarrh: warm and cold. The complications vary depending on the type of Catarrh and the affected organ; the Eustachian tube, the lacrimal duct, the digestive tract and the respiratory tract are the assumed pathways to spread the Catarrh.

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**Figure 1.** A Brief review in the etiology of Nazleh and Zokam [22]
Table 1: Expected complaints due to catarrh flows based on TPM

<table>
<thead>
<tr>
<th>Affected organ</th>
<th>Expected complaints*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Conjunctivitis [12]</td>
</tr>
<tr>
<td>Ear</td>
<td>Otitis Media with effusion [12]</td>
</tr>
<tr>
<td>Nose</td>
<td>Ulcers [12]</td>
</tr>
<tr>
<td>Palate</td>
<td>Uvulitis [12]</td>
</tr>
<tr>
<td>Throat</td>
<td>Pharyngitis [12]</td>
</tr>
<tr>
<td>Larynx</td>
<td>Laryngitis [12]</td>
</tr>
<tr>
<td>Stomach</td>
<td>Stomach pain and ulcers, gastrogenic diarrhea and canine appetite [12]</td>
</tr>
<tr>
<td>Lung</td>
<td>Cough, pleurisy and tuberculosis [12]</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>Swelling in the flanks and pleurisy [12]</td>
</tr>
<tr>
<td>Intestine</td>
<td>Diarrhea, enteritis and intestinal ulcers [12]</td>
</tr>
</tbody>
</table>

* The words used in this column seems to be the most appropriate words for the terms mentioned in traditional medicine text books, but in some cases may not be matched perfectly.

As the TPM physicians believed in the brain origin for Catarrh, various problems would be expected if the substance remains in the brain. These problems include dizziness and vertigo, temporal headaches, epilepsy, stupor and mania and even stroke, cerebritis, meningitis and encephalitis [9, 12]. Although some complications such as otitis media, sinusitis, pneumonia, exacerbation of asthma and chronic obstructive pulmonary disease [23] have been mentioned for Catarrh in conventional medicine. The proposed complications of TPM are more detailed and serious, therefore more attention has been paid to treat Catarrh as a source for many chronic diseases.

**Treatment**
The TPM physicians have considered several items as the principles of treatment and based the therapeutic suggestions on these principles. These items are presented in Table 2. [4,5,12, 24-26]
Table 2: Treatment principles [4,5,12,24-26]

<table>
<thead>
<tr>
<th>Principles of treatment</th>
<th>Details of treatment</th>
</tr>
</thead>
</table>
| 1 Reduce the amount of the disease substance | • Reduce the food quantity  
• Expulsion of the causative humor  
• Apply Laxatives  
• Cephalic vein Venesection in some cases in hot Catarrh |
| 2 Temperament modification | Hot Catarrh  
• Lukewarm bath  
• Anoint the umbilicus with viola odorata (Banafsaj) oil  
Cold Catarrh  
• Keep the head warm  
• Having light meal  
• Reduce the sleep (specially during the day) |
| 3 Preventing the disease substance to spread to other organs | Hot Catarrh  
• Drink Papavera somniferum (Khashkhash) syrup with Barley water (Ma ol-shair)  
• Taking cold cooked Lentil (Adas), Papavera somniferum (Khashkhash) and Zizyphus vulgaris (Annab).  
Cold Catarrh  
• Drink Sweet decoctions  
• Taking warm cooked Lentil (Adas), Papavera somniferum (Khashkhash) and Zizyphus vulgaris (Annab). |
| 4 Adjust the consistency of the disease substance | Hot Catarrh  
• Concentrate the disease substance with Papavera somniferum (Khashkhash)  
Cold Catarrh  
• Dilute the substance with Hyssopus officinalis (Zufa) syrup, Jollab with Glycyrrhiza glabra (Sus) syrup or Oximel (Sekanjabin). |
| 5 Deviate the disease substance to an opposite side towards the head | Veer the catarrh substance to nose by sneezing to prevent it from the throat and protect the lung.  
• Prevent sleeping in supine position. |
| 6 Prevent probable respiratory complications | Drink barley water (Ma ol-shair) with violet syrup and rose oil (to cough up the sputum). |

**Classification of treatment according to the cause**

I. Hot dystemperament  
1. Decrease the amount of food especially in primary three days of Catarrh [12].  
2. Eat barley soup and a soup cooked with the water which stays on the soaked wheat bran, Broad bean (Bagela) flour, Starch, Sugar, Almond oil and Gum Tragacanth (Katira) [10, 12].  
3. Drink decoctions of Opium poppy (Khashkhash), Violet (Banafsaj), Jujube (Annab) and Sebestan plums (Sepestan) [10, 12].  
4. Drink decoction of Violet (Banafsaj), Lic-
orice (sus), Hollyhock (Khatmi), Jujube (Annab), Sebestan plums (Sepestan), Purging cassia (Khiar shanbar), Pockspray Manna (Shir khesht) and Barley water (Ma-ol-shair) (9, 10) as laxatives.

5. Inhalations of cold-natured oils/essences like Violet (Banafsaj), Water Lilly (Niloofar) and Zucchini (Qar’) oil; they relieve itching and adjust the brain temperament.

6. Incense Camphor (Kafur) and soaked bran in vinegar to prevent excretion flows in prolonged disease [10].

7. Venesection is recommended to decrease the disease substance and conduct it to an opposite side towards the head [10].

8. Take a bath with lukewarm water that can potentially cool down the body temperature and relieve the irritant itching.

II. Cold dystemperament

1. Eat a soup cooked with mung beans and sweet almond extract [9].

2. Cover the head with a bag containing warm millet (Jawaras).

3. Pour the warm decoction of Chamomile (Babunaj), Milk Vetch (Aklil al-malek) and Origany (Marzanjush) on the head [9, 10, 20, 21].

4. Inhalation of Aloes wood (ud); Black cumin (shuniz), laudanum (Ladan) and Costus (Qost) soaked in vinegar in order to adjust the brain temperament and resolve the probable obstructions [9,10,24].

5. Inhalation of Black cumin (shuniz), Anise (anisun), Musk (moshk) and Amber (anbar) [8-10, 20].

6. Take a hot bath would facilitate the secretions removal [9,10,24].

III. Repletion of the whole body and the brain

1. Yellow bile predominancy
   • Laxation of the bowels with fruit juice, Purging cassia (Khiar shanbar), Camel’s Thorn Manna (Taranjabin), and drink Barley water (Ma-ol-shair) [9,10].
   • Drink the decoction of Opium poppy (khash-khash) if the discharge is so diluted [10].
   • Inhalation of some burnt sugarpum (Nabat), Sesame Seed (Konjed) and coriander fruit (Koz-boreh) in the case of ethmoid bone obstruction [9,10].

2. Blood predominancy
   • Venesection of the Cephalic vein [9,10].
   • Decoction of opium poppy (khashkhash) and Jujube (Annab) as laxatives [9,10].
   • Incense of Indian valerian (Sonboletib), Sandarac (Sandarus) and Aloes wood (ud) in the case of ducts obstruction [9,10].

3. Phlegm predominancy
   • Decoction of Hyssop (Zufa), Licorice (Sus), Fig (Tin) and Camel’s Thorn Manna (Taranjabin) as laxatives.
   • Drink a syrup made of Rose water, Saffron and Sugar (Jollab), instead of water during the day.
   • Incense the decoction of Dill (shebet), Chamomile (Babunaj), Southernwood (Qeysum), Saatar (Sa’tar) and Milk Vetch (Aklil al-malek) [9,10].

4. Black bile predominancy
   • Drink Barley water (Ma-ol-shair) boiled with Opium poppy (Khashkhash).
   • Eat a soup cooked with Starch, Sugar and Almond oil.
   • Incense violet (Banafsaj) and hollyhock (Khatmi), and also put them on the forehead [9,10, 27].
## Table 3: Medical herbs recommended by TPM to treat catarrh

<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Common name</th>
<th>Traditional name</th>
<th>Type of catarrh</th>
<th>Current findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astragalus gummifer</td>
<td>Gum Tragacanth</td>
<td>Katira</td>
<td>Warm</td>
<td>Alcoholic extracts of the herb and roots showed significant anti-inflammatory and hepatoprotective activity in Wistar rats [28].</td>
</tr>
<tr>
<td>Papaver somniferum L.</td>
<td>Opium poppy</td>
<td>Khashkhash</td>
<td>Warm</td>
<td>Antioxidant properties and antimicrobial activities were shown using ethanol and methanol extracts of the monofloral bee pollen [29]. It has long been used for pain relief and as an analgesic [30].</td>
</tr>
<tr>
<td>Viola odorata L.</td>
<td>Violet</td>
<td>Banafsaj</td>
<td>Warm</td>
<td>The antioxidant potency of the extract was shown in the in vitro models [31]. Violet syrup could enhance the cough suppression in children with intermittent asthma [32].</td>
</tr>
<tr>
<td>Cordia myxa L.</td>
<td>Sebastian plums</td>
<td>Sepestan</td>
<td>Warm</td>
<td>It is a great source of trace elements, phenolic and flavonoid compounds [33]. Phenolic compounds could be a natural source of antioxidants [34]. Anti-inflammatory effect was observed in induced colitis in rats [35].</td>
</tr>
<tr>
<td>Glycyrrhiza glabra</td>
<td>Licorice</td>
<td>Sus</td>
<td>Warm- Cold</td>
<td>Licorice and its natural compounds have demonstrated anti-inflammatory activities [36]. Pharmacological investigation on the active ingredients of licorice flavonoid concluded that they had antioxidant, antibacterial, antitumor and inhibiting HIV activities [37]. Glycyrrhiza glabra was identified as one of the best candidates for modulation of the immune system and inflammation [38].</td>
</tr>
<tr>
<td>Althea officinalis L.</td>
<td>hollyhock</td>
<td>Khatmi</td>
<td>Warm</td>
<td>A systematic review indicated Althea officinalis L. as one of the most promising herbs for diseases of respiratory tract [38].</td>
</tr>
<tr>
<td>Cassia fistula</td>
<td>Purging cassia</td>
<td>Khiar shanbar (folus)</td>
<td>Warm</td>
<td>Research findings have confirmed the therapeutics consequence of C. fistula in the health management via modulation of biological activities due to the rich source of antioxidant [39]. Fruit pulp extracts showed antibacterial and antifungal activities In vitro [40].</td>
</tr>
<tr>
<td>Cotoneaster numulariooides Pojark, Cotoneaster numularia Fisch &amp; May</td>
<td>Pockspray Manna</td>
<td>Shir khesht</td>
<td>Warm</td>
<td>Methanol and water extracts exhibited biological activities and appreciable antibacterial properties [41]. As one of the most widely used drugs for the treatment of jaundice in Iran [42].</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Common Name</td>
<td>Species/Local Name</td>
<td>Temp.</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------------</td>
<td>--------------------</td>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hordeum vulgare L.</td>
<td>Barley</td>
<td>Shaeer (Jo)</td>
<td>Warm</td>
<td>Bioactive components of some grains including barley, have demonstrated antioxidant and anti-inflammatory activities in cells and animals [43].</td>
</tr>
<tr>
<td>Nymphaea alba L.</td>
<td>Water Lily</td>
<td>Niloofar</td>
<td>Warm</td>
<td>Ethanolic and methanolic extract of N. alba showed strong antibacterial activity. Antitumor activity was obtained with methanolic extract; Ethanolic extract exhibited strong tumor inhibitions [44].</td>
</tr>
<tr>
<td>Cinnamomum camphora (L.) N. et Ebren</td>
<td>Camphor</td>
<td>Kafar</td>
<td>Warm</td>
<td>Ethanolic extract of Cinnamomum camphora, exhibited antibacterial activity against S. pyrogenes [45].</td>
</tr>
<tr>
<td>Panicum miliaceum</td>
<td>millet</td>
<td>Jawaras</td>
<td>Cold</td>
<td>Methanolic extract showed significant antibacterial activity against S. aureus. The free radical scavenging activity observed by DPPH assay, indicated antioxidant activity at all levels of concentrations in solvent [46].</td>
</tr>
<tr>
<td>Matricaria chamomilla L.</td>
<td>Chamomile</td>
<td>Babunaj</td>
<td>Cold</td>
<td>Ethanolic and methanolic extract of N. alba showed strong antibacterial activity. Antitumor activity was obtained with methanolic extract; Ethanolic extract exhibited strong tumor inhibitions [44].</td>
</tr>
<tr>
<td>Astragalus hamosus L.</td>
<td>Milk Vetch</td>
<td>Akil al-malek (nakhonak)</td>
<td>Cold</td>
<td>Rhamnocitrin 4-β-D-galactopyranoside (RGP), isolated from A. hamosus, was effective protector and antioxidant in isolated rat hepatocytes [47].</td>
</tr>
<tr>
<td>Origanum vulgare L. subsp. Viride (Boiss) Hayek</td>
<td>Origanoy</td>
<td>Marzanjush</td>
<td>Cold</td>
<td>Origanum vulgare L. was identified as one of the best candidates for modulation of the immune system and inflammation [38]. O. vulgare extract exhibited the antioxidant capacity, in line with the rosmarinic acid and polyphenolic contents and the antimicrobial testing showed a significant activity against L. monocytogenes, S. aureus and C. albicans [48].</td>
</tr>
<tr>
<td>Aquilaria agallocha Roxb.</td>
<td>Aloes wood</td>
<td>u'd</td>
<td>Cold</td>
<td>Aloes wood oil significantly reduced the skin thickness, oxidative stress and pro-inflammatory cytokines production in TPA-induced mouse ear inflammation model [49].</td>
</tr>
<tr>
<td>Nigella sativa L.</td>
<td>Black cumin (black seed)</td>
<td>Shuniz (Siah daneh)</td>
<td>Cold</td>
<td>A high level of natural antioxidants could be derived from NSO extracted by supercritical fluid extraction [50]. N. sativa essential oil microemulsion was highly effective against S. aureus, B. cereus and S. typhimurium [51]. Preventive effect of Nigella sativa was showed on tracheal responsiveness and lung...</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Extract/Part</td>
<td>Mode of Preparation</td>
<td>Action</td>
<td></td>
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<tr>
<td>----------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Cistus ladanifer</td>
<td>Laudanum</td>
<td>Cold</td>
<td>Inflammation of sulfur mustard exposed guinea pigs [52].</td>
<td></td>
</tr>
<tr>
<td>Costus speciosus</td>
<td>Galangal</td>
<td>Cold</td>
<td>Hexane extract showed promising antibacterial and antifungal activity. The isolated compound costunolide showed good antifungal activity [54].</td>
<td></td>
</tr>
<tr>
<td>Pimpinella anisum L.</td>
<td>Anise</td>
<td>Cold</td>
<td>Aqueous extract of C. ladanifer significantly reduced the edema paw inflammation in rats in addition, the same AE demonstrates significant analgesic effect in thermal-induced pain model [53].</td>
<td></td>
</tr>
<tr>
<td>Sesamum indicum L.</td>
<td>Sesame Seed</td>
<td>Warm</td>
<td>Sesame showed relevant effects on oxidative stress [57]. Antibacterial assays against food borne pathogens revealed sesamolin- the thermally degraded product of sesamolin -to be an antimicrobial agent. Sesamol also exhibited antioxidant and free radical scavenger properties [58].</td>
<td></td>
</tr>
<tr>
<td>Coriandrum sativum L.</td>
<td>coriander fruit</td>
<td>Warm</td>
<td>C. sativum L. seed aqueous extract contributes in activating host defense against pathogens by stimulating the innate immunity [59].</td>
<td></td>
</tr>
<tr>
<td>Nardostachys jatamansi DC.</td>
<td>Indian valerian</td>
<td>Warm</td>
<td>The study suggested that the herb unequivocally is a potential source of antioxidants and could aid in alleviating oxidative stress-mediated disorders [60].</td>
<td></td>
</tr>
<tr>
<td>Callitris quadrivalvis</td>
<td>Sandarac</td>
<td>Warm</td>
<td>Hyssopus officinalis L. played an anti-inflammatory role by inhibiting the invasion of EOS and decreasing the levels of IgE, and affected as immune regulation in a mouse model of chronic asthma [61].</td>
<td></td>
</tr>
<tr>
<td>Hyssopus officinalis L.</td>
<td>Hyssop</td>
<td>Cold</td>
<td>Dried fig prevented oxidative damage in the tissues by inhibiting the production of ethanol-induced free radicals and hepatotoxicity in rats [62].</td>
<td></td>
</tr>
<tr>
<td>Ficus carica</td>
<td>Fig</td>
<td>Cold</td>
<td>A broad range of biological activities have been ascribed to different parts of Alhagi. It is also valued as a rich source of digestible protein and important minerals [63].</td>
<td></td>
</tr>
<tr>
<td>Alhagi persarum Boiss. &amp; Buhse.</td>
<td>Camel’s Thorn Manna</td>
<td>Warm</td>
<td>The essential oil inhibited the growth of selected bacteria [64]. Aqueous extract of Anethum...</td>
<td></td>
</tr>
<tr>
<td>Anethum graveolens</td>
<td>Dill</td>
<td>Cold</td>
<td></td>
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</tbody>
</table>
Artemisia abrotanum | Southernwood | *Qeysum* | Cold | A nasal spray formulation containing an extract characterised by a mixture of essential oils and flavonoids from *Artemisia abrotanum* L., appeared to be clinically suitable for the prophylactic and therapeutic management of patients with allergic rhinitis and adjuvant symptoms [66]. Flavonols with spasmolytic activity isolated from a methanol extract of *Artemisia abrotanum* L. [67].

Zataria multiflora Boiss. | Saatar | *Sa’far* | Cold | *Z. multiflora* hydroalcoholic extract could inhibit the growth of important human pathogens [68].

### Discussion

The study shows the importance of Catarrh from the perspective of TPM. Master TPM physicians have tried to explain the etiology and the probable complications with the assistance of experience, comparison and the body-nature functions; this concern expresses their awareness on all the aspects of the disease. They believed that the essential basis of prevention and treatment of many chronic diseases may relate to proper approach to “catarrh”. In the state of treatment, they have also paid special attention to the patient’s diet previous to drug administration; believing that suitable diet as one of the six essential principles of preventing and treating disease [68,69], is the first step of treatment by producing qualified humors; drug administration is the next following step and helps to adjust the deviant temperament. According to Table 3 most of the herbs used in TPM for treating Catarrh have indicated anti-inflammatory, antioxidant, antibacterial or antifungal effects in recent researches, so more investigations on such herbs may approve their traditional application.

Although the prevalent complaint of Catarrh disappears in the most cases, probable risk of serious and considerable complications leads to apply appropriate methods towards preservation and prompt and proper treatments. It should be noted that this overview is the beginning for researchers who are interested in evaluating such complaints with a new outlook, and opens a new path through more comprehensive researches.

In addition, the theory of “remaining the waste-material derived from incomplete metabolism in the body (due to any reason such as poor diagnosis, mismanage of the illness or disability of the body-nature to overcome the disease), would lead to serious and significant diseases in different organs” should be considered for more investigations.

### Conflict of Interest

None.
Acknowledgment

None.

References

Catarrh in perspective of TPM


