Original Article

Postnasal Drip Syndrome and Cough, Management and Diagnostic Approach in Primary Health Care Centre

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Abstract

Background: Postnasal drip syndrome (PNDS) or catarrh is a condition that is characterized by recurrent secretions from the nose and the paranasal sinuses into the pharynx. It might present as a simple condition in primary health clinics but it requires proper evaluation and management to deal with such cases. **Objective:** In this review, we aim to discuss the evaluation of PNDS and to learn how to deal with such conditions. **Method:** PubMed database was used for articles selection, and the following keys were used in the mesh ((“postnasal drip syndrome"[Mesh]) AND (“catarrh”[Mesh]) OR (“evaluation"[Mesh])). **Conclusion:** It is important to treat this condition even if we could not find the underlying cause. Therefore, empiric therapy is the solution because it may not only treat the case; it can also confirm the hypothesized diagnosis. However, refractory cases to different empirical treatment plans require a thorough evaluation to rule out serious problems.

Keywords: Postnasal Drip Syndrome, Diagnosis and Management

Introduction

Postnasal drip syndrome (PNDS) or catarrh is a condition that is characterized by recurrent secretions from the nose and the paranasal sinuses into the pharynx [1]. It is diagnosed clinically relying on patients’ descriptions of what they always sense in their throats, which is the sensation of constant secretions into the throat and recurrent urge to clear the throat and the nose [2]. This makes the diagnosis of PNDS a subjective diagnosis because there are no specific nor objective methods to depend on in diagnosing PNDS. The use of nasendoscopy has been suggested and spotting rhinitis and mucopurulent secretions with it can be helpful but it is not diagnostic [1]. The safety of the medications and the quality of patient care have been global issues [3].

PNDS can be associated with other symptoms, such as cough but it is not easy to prove that PNDS is the cause of this cough. Cough can be triggered by rhinitis, sinonasal abnormalities, or any upper respiratory symptoms. Moreover, PNDS-induced cough can precipitate gastroesophageal reflux disease (GERD), and vice versa. GERD can be associated with other upper respiratory symptoms. This increases the complexity of making a definitive diagnosis [4]. In this article, we aim to review PNDS and how to evaluate such cases in primary health care. Health is very important to us [5-8].

Method:

PubMed database was used for articles selection, and the following keys were used in the mesh ((“postnasal drip syndrome"[Mesh]) AND (“catarrh”[Mesh]) OR (“evaluation"[Mesh])).

In regards to the inclusion criteria, the articles were selected based on the inclusion of one of the following topics: postnasal drip, evaluation, diagnosis, and management.

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Exclusion criteria were all other articles that did not have one of these topics as their primary endpoint.

Discussion:

PNDS in the medical literature was first described by Dobell in 1866 and he referred to it as postnasal catarrh. He described it as an annoying sensation in the nasopharynx with expectoration of mucus alongside mucus accumulation behind the soft palate in the oropharynx and the nasopharynx. Dobell also mentioned the association of intermittent cough in patients with PNDS without the presence of lung disease [9].

Patients with PNDS may describe the sensation as persistent phlegm in the back of the throat that cannot be swallowed down and/or consistent mucus stagnation within the nose without being able to snort it back. There might be also a persistent need to clear the throat to have a clear voice. These complaints might be simple but they will require obtaining detailed history to have an appropriate differential diagnosis.

Patients should be asked about the onset and the timing. The associated symptoms and the aggravating factors should be asked about. Symptoms of rhinosinusitis should be asked about, for example, itchiness of the nose, recurrent sneezing, rhinorrhea, recurrent nasal congestion, and decreased sense of smell. Also, GERD and laryngeal symptoms should be looked at, such as dysphagia, odynophagia, burning sensation in the chest or down the throat, hoarseness of voice, and cough.

Regarding cough, it is not simple to say that PNDS is the cause of this cough. Cough as well can be triggered by rhinitis, sinonasal abnormalities, or any upper respiratory symptoms. As we mentioned earlier, there is no specific test to include such a disease [10]. This issue led to the introduction of the term Upper Airway Cough Syndrome (UACS), which is recommended to be referred to the conditions that can stimulate cough receptors leading to cough and can be associated with PNDS [1]. It is important to find a solution for the cough as soon as possible to prevent its long-term complications. Therefore, it is recommended to start a general treatment even if there is not found a definitive cause. This empiric therapy can also confirm the diagnosis of UACS if the cough got resolved. The treatment plan might include nasal steroids, systemic antihistamines, treating associated infections, sinonasal anatomical abnormalities correction, and specific allergens avoidance [4, 11].

The empiric therapy usually starts with prescribing a first-generation antihistaminic drug and a decongestant. If the cough is improved or resolved completely, the UACS diagnosis is confirmed and the antihistaminic medication should be continued. Sometimes, the targeted results may take from weeks to months [12].

If the antihistamine did not show any improvement, sinus imaging should be done to exclude sinusitis. One of the possible complications of chronic sinusitis is cough, either productive or nonproductive [11, 13]. Sinusitis should be treated appropriately by the use of proper antibiotics, intranasal steroids, and/or decongestants. Some cases might be refractory to medicinal therapy. Therefore, referral for sinus evaluation by computed tomography imaging is recommended for possible endoscopic sinus surgery. Endoscopic sinus surgery is the treatment of choice in cases of allergic fungal sinusitis to remove the congested mucus with fungal elements [4, 14].

Some of the diagnostic strategies are serum Ig levels measurement to exclude hypogammaglobulinemia, skin test for allergies, and exclusion of potential allergens that can be present in the patient's surrounding environment [1]. Exclusion of smoking-related pulmonary diseases or chronic ACE inhibitors use is important because they are potential cough causes. Chest radiography should be done as well to exclude lung disease [1, 15].

Also, around 25% of chronic cough patients have cough-variant asthma [16, 17]. Therefore, spirometry is also recommended. However, to add more complexity to the diagnosis, some asthmatic patients may have normal spirometry results. Therefore, it is recommended to initiate an empirical therapy for asthma-like starting the use of inhaled bronchodilators or inhaled corticosteroids. Improvement of the cough and the associated symptoms with the anti-asthmatic treatment use confirms the diagnosis of cough-variant asthma [15].

Moreover, 10% of chronic cough patients have shown to have GERD disease and it is thought that GERD is the precipitating factor [17]. The reflux may directly irritate the laryngopharyngeal mucosa with the possibility of direct exposure of the upper airway to the gastric acid. Nasopharyngolaryngoscopy is necessary to evaluate the possible reflux irritation in patients with GERD-related chronic cough [1]. Patients, with typical GERD symptoms, such as heartburn and regurgitation, should be treated. GERD treatment involves acid-suppressive medications like PPIs for 3 months alongside lifestyle modification [10, 18].

Finally, it is always recommended to have a high suspicion index and to think outside the box. If the patients did not improve with the empiric trials, a more thorough evaluation should be conducted because they might have other abnormalities. The main aim of the evaluation is to rule out serious underlying conditions. Direct referral to an otolaryngologist is the recommended option when there is one of the alarming signs and symptoms, such as weight loss, dysphagia, persistent pain, persistent hoarseness, or cervical lymphadenopathy because they may present with a malignancy [10].

Conclusion:

It is important to treat this condition even if we could not find the underlying cause. Therefore, empiric therapy is the

solution because it may not only treat the case; it can also confirm the hypothesized diagnosis. However, refractory cases to different empirical treatment plans require a thorough evaluation to rule out serious problems.

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