Asthma-Related Allergies

Aleydis Martin-Cervera

MRU

Professor Shazia Zaidi

Abstract

Allergies are common in the present age. Asthma-related allergies are prevailing more than ever before due to changes that have occurred in life. Industrial workplace waste, indoor living habits, and lack of awareness are causes of allergy problems. Allergies become more significant when they lead to specific asthmatic symptoms. The existing research on these diseases enables clinicians for treating patients to an extent. An immediate need to conduct large-scale studies involving long-term follow-ups is evident. Treatment given as early as possible would be more helpful in controlling the diseases. The study by sampling patients in large numbers with different contexts can yield more comprehensible results.

Asthma-Related Allergies

**Introduction**

 Allergies related to asthma are the subject of serious concern for medical practitioners in the present time. Certain allergies lead to asthmatic problems, which can be severe to the unpredictable limit. Asthma-related allergies can be controlled by the use of proper medicine, depending on the history of the disease. People must be informed of the symptoms, risk factors, and treatment guidelines for these diseases. Studies conducted on the subject are not comprehensive, yet they have enabled practitioners to treat patients to some satisfactory extent. However, allergies tend to increase in their prevalence in the coming time. It is not known to the clinicians what complications might arise in the future in allergic reactions. Therefore, further studies to know the underlying mechanism of allergies in-depth are inevitable.

**Thesis Statement**

 Allergies related to asthma can be controlled with medications, raising awareness and knowing the risk factors.

**Literature Review**

Asthma is a clinical condition that is caused due to certain blockage in the air passages or trachea that causes a person to breathe with different degrees of difficulty according to the intensity of the situation. The blockage of airways is caused because the air vessels become inflamed that causes narrowness of the inner passage for passing air. The inner linings of air passages in the trachea and lungs produce unnecessary mucus. Coughing and wheezing are mostly associated with asthma, constituting its major symptoms. Asthma is a chronic or long-term disease associated with lungs. Asthma, in its acute form, makes it much difficult for a person to move or engage in daily activities. Subject experts say that asthma and allergies often occur together. Asthma can be caused by many substances that cause allergies of different kinds. For instance, certain food allergies can be the reason for some asthma symptoms. Antibodies that are the immune system proteins mistakenly attack harmless substances in an allergic response. Though the immune system responds aggressively and releases chemicals to protect the body, it leads to allergy symptoms in the body. During allergies, certain body cells such as basophils release a chemical named histamine that enhances the permeability of blood capillaries to white blood cells and certain proteins (Del Giacco et al., 2017). White blood cells bind to the pathogens inside the infected tissues. Allergies related to asthma cause skin reactions, itchy eyes, runny nose, nasal congestion, etc.

Research on asthmatic allergies has revealed useful information in diagnosing and treating the subjects. However, some aspects still need to be studied. Research findings say that genetic factors only cannot be attributed to explain the rapid increase in allergic diseases. Allergic diseases are worsened by biological allergens, air pollution, and other things. Together, they increase their impact on allergies. The underlying mechanism of damage in the air passages is unknown to date. Asthma and related allergies sometimes emerge as epidemics. They mostly hit young people of a country despite the fact they belong to developed or underdeveloped countries. The increased susceptibility in individuals to develop allergy on being exposed to pollens is not justified yet. However, lifestyle factors and environmental factors tend to cause this increase.

A strong connection is present between asthma and respiratory infections caused by viruses. Asthma risks increase with the interaction between viruses and allergies. Allergies increase risks of asthma, so do other factors including pollution, smoking, and occupational exposures (Welch, 2019). Climate change and air pollution affect people’s health significantly by triggering the prevalence of allergic diseases related to asthma, exacerbating chronic lung diseases, and causing declines in lung function. The rate of deaths caused by asthma has been reduced significantly over the past three decades. However, no sustainable cure has been discovered for asthma and the disease has to be carried out all through life. The physicians treat patients with asthma and those affected with allergies differently, but in some cases, the treatment for both asthma and allergies is the same. Asthma has no cure, but certain medical treatments can treat symptoms of asthma and related allergic reactions. Some medicines can give relief to asthmatic patients by reducing the irritation and inflammation of air passages (Sullivan et al., 2019).

Opportunities for developing preventive measures become limited because reasons for the prevalence of asthma and related allergies have not been defined. In primary prevention studies, few risk factors have been assessed. Observational studies do not substantiate the causality of these diseases. However, a wide range of risk factors has been associated with asthma and related allergies. No prevention intervention strategy has undergone examination in randomized controlled trials to provide sufficient evidence that has widespread implementation in clinical work. It is necessary to understand factors causing asthma so that public health prevention measures can reduce the spread of asthma worldwide. Besides thinking about risk factors that cause allergies and asthma, prevention strategies need to be developed and research methods should be employed to provide the required evidence for the implementation of the prevention strategies developed. Public health efforts need to be directed toward measures that have the potential to improve general and lung health (Ortiz et al., 2018). To this end, focus should be on reducing usage of tobacco, environmental exposure to tobacco smoke, mitigating outdoor and indoor air pollution as well as occupational exposure, discouraging obesity, encouraging use of a diet that that is high in vegetable fruits, improving health of fetus and mother in maternity issues, promoting awareness of the benefits of breastfeeding, urging people to regularly get their children vaccinated, and decreasing inequalities in society (Sheehan & Phipatanakul, 2016).

**Research Method**

This research is based on secondary research to provide a framework for discussion. The existing literature on asthma and related strategies provided information that discloses many facts about the subject. This study articulates the different discussions presented in the literature. Five credible sources have been selected to collect necessary, important information, and synthesized subsequently to construct ideas and deduce useful implications. The five peer-reviewed articles contain quantitative and qualitative researches to reach certain findings. The research methodology applied to this study helped generate a comprehensive body of information on the subject.

**Results**

This study revolves around the arguments that allergies related to asthma can be controlled by using appropriate medicine. Regarding asthma, though it is not curable to the full extent, it can be controlled by specific treatment and measures. Sequential changes in people's lifestyles have given rise to increased differentiation of allergic diseases. Medicine used for curing these diseases can prove harmful as those have certain side effects. Therefore, the researchers must find a new medicine or therapeutic agent that has no or minimal side effects and is economical so that patients with all types of financial backgrounds could purchase it for their use. In research conducted on folk medicine, herbal medicine was used to treat patients with asthma and asthma-related allergies, and it was found to be quite effective for containing a potential bioactive compound. Certain cellular and molecular mechanisms of asthma indicate the importance of an alternative treatment to those currently used. The researchers evaluated pharmaceuticals, biologics, and procedures to find that herbal and allopathic treatments are effective. Since herbal medicine is less harmful or not-at-all harmful, it can be used preferably. The research indicates that several metabolites are responsible to manage asthma and related allergies.

Allergies related to asthma can be treated by different methods. One of the treatments is by using montelukast, a leukotriene modifier. It comes in the forms of pills and controls chemicals of the immune system, which are released during some allergic reaction. Using montelukast can cause a psychological reaction in a person, for instance, it can create suicidal thinking in its severe reactions. Another treatment for asthma-related allergies is immunotherapy, the allergy shots. This treatment gradually reduces the response of the immune system to the allergy-causing agents. Thus, it provides treatment for asthma as well. The treatment involves administering regular injections of small amounts of allergens that are involved in triggering the symptoms. With time, the immune system becomes tolerant against the allergens and the allergic reactions cease at the end. This decreases symptoms of asthma as well. To achieve substantial results of this treatment, the procedure of administering injections should be continued for three to five years. IgE therapy, also known as anti-immunoglobulin therapy, involves the use of medicine, omalizumab, which interferes with antibodies, IgE, present in the body, and contributes to preventing the allergic reaction that leads to asthmatic symptoms. IgEs are released by the immune system of the body when some specific harmful substances, allergens, are sensed by the body. In allergic reactions, the body becomes oversensitive to allergens, IgEs mistakenly identify some substances to be allergens, and the immune system is signaled to release histamines into the bloodstream.

Awareness needs to be created for preventing asthma-related diseases. People must be informed through different media to take precautionary measures so that the disease could be avoided beforehand. People need to know that several allergies lead to asthma, and if rectified in the beginning stages, the severity of asthma can be avoided. Further, they must have a basic understanding of the risk factors contributing to acquiring diseases of allergy and asthma, which include viral infections, smoking, pollution, and exposures related to work. The influences of these factors need to be understood in depth by the physicians and disseminated to the public through the use of media and publications. People, in general, and patients, in particular, should be advised to take precautionary measures against the risk factors of asthma-related allergies. Risk factors that need to be made known to all for possible avoidance of the resulting diseases include: exposure to environmental tobacco, outdoor as well as indoor air pollution, work-related pollution, obesity, diet low in vegetables and fruits, complications related to fetal and maternal health, neglecting breastfeeding, ignoring children’s vaccinations, and social inequalities.

**Discussion**

Allergies that are related to asthma can be treated with medicine and patients can get relief from pain and suffering. Though the need for discovering new medicine is still prevalent to cope with the disease, yet enough can be done to cure such patients by applying the findings of related research and appropriate medicine. In-time visits to doctors are essential in treating asthma and related allergies. In many countries, most of the people cannot afford to pay fees to doctors, nor do they have the facilities provided by their governments to get them treated medically as per the minimum accepted standards internationally. Getting a prescription plan and following it according to the doctors’ advice is inevitable in treating these diseases. Failure to acquiring a doctor's prescription or following the advised treatment can result in severities because many allergic reactions have been found to lead to asthma. Flu and pneumonia are common allergies that are associated with asthma if they get out of control due to a lack of timely treatment. Therefore, people can avoid these allergies and subsequent asthmatic symptoms by getting vaccinated timely. If one tries to find out the causes or factors that lead to allergic reactions, these diseases can be avoided to a great extent. No more effort is needed to be aware of the environmental pollutants and avoid them. Cold air, pollens, and dust can be avoided by carrying out basic precautionary measures in this regard. One can remain alert about one’s breath, monitor sound and ease of inhaling and exhaling air, and other warning signs of allergies and asthma. This can prove helpful in coping with shortness of breath, wheezing, and coughing. However, a person's lung function can decline by giving any prior symptoms. This implies that regular examination in such patients is essential, and should be conducted after short intervals of time. A successful approach applied in dealing with asthma and related allergies is to be proactive and tackle these diseases before they can become serious causing severe attacks and requiring more medication. Further in this regard, the patient attacked by such allergy or asthmatic problems should stop any activity immediately that could be considered to trigger such reactions. Relying only on the use of an inhaler for relief is also not recommendable, as it does not control the disease fully.

Increasing awareness in people about allergies related to asthma is inevitable for preventing them, especially for avoiding such epidemics. To successfully cope with these diseases, people must be familiar with their symptoms that include tightness of chest, shortness of breath, sleeping troubles, wheezing sound in breathing, coughing attacks, and similar others. Asthma can be caused due to exercise in cold and dry air, or occupational irritants such as gases, fumes, or dust. However, allergies can also cause asthma that is sometimes more severe than other types of asthma. Asthma induced by allergy can be caused by dried saliva of pets, particles of the skin of the pets people keep at homes, cockroach wastes, mold spores, and pollens. People, especially patients having allergies or asthma, should contact their doctors immediately when they find any of the above-said symptoms.

The risk factors that can be responsible for asthma-related allergies should also be known to the patients and common people. These diseases might be genetic, like someone who has a blood relative having such diseases. Being over-weight or smoker increases the risks of such allergies. Exposure to passive smoke, chemical fumes released at some workplaces, and chemicals used in manufacturing, hairdressing, or farming – all can cause asthma as well as the related allergies.

**Limitations and Implications**

 The existing research on asthma-related allergies is insufficient in many ways. Lack of power and resources, scarcity of reporting that yields long-term outcomes, and conducting studies in single communities are some of the factors that limit the current research. Studies are not coherent with the new inventions and knowledge that evolves with time. Allergies have originated and increased with the advent of the modern age. Remaining indoors causes more allergies as compared to living with close contact with nature. Studies do not represent precisely the general population, as sampling is not comprehensive to involve individuals with different backgrounds.

**Conclusion**

 Allergies that are related to asthma can be cured with medicine to a considerable extent. However, the exact mechanisms for controlling these diseases have yet not been discovered due to the lack of studies need. Since most allergies have emerged with modern lifestyles, complications to arise in the future call for extensive research on the issue. People must be made aware of the symptoms to avoid any severe conditions. Future research is essentially needed on the subject to prevent the rapid increase of allergies in the modern world.

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