Name of Student

Name of Professor

Name of Class

Day Month Year

**Asthma**

**Overview**

Asthma is a disorder in the respiratory system in which passages that allow air to pass into and out of the lungs sporadically narrow and causes shortness of breath, wheezing and coughing. This narrowing is usually reversible and temporary, but asthma could possibly cause death in severe attacks. Commonly asthma is referred has bronchial asthma, that is a swelling of the airways, but it is also referred as cardiac asthma, that happens when fluid develops in the lungs as a complication of heart failure. In the US more than seventy million people suffer from asthma with five million cases occur with children below the age of eighteen and causes at the socio-economic levels (Binuyo). It occurs to all ages in male and female and generally common in the poor urban areas, industrialized areas and the areas with cold climates.

Scientists suspect that there is increased exposure to the growing populations in city centers, second-hand cigarette smoke, and the new constructions that are poorly ventilated. In the human body, every cell needs oxygen to work, and lungs make oxygen present. Every breath the people take, air travels to the lungs by a sequence of airways and tubes. After going through the mouth and throat, the air goes into the larynx, that is used to be called voice box, and then by windpipe or trachea. The windpipe will be divided into two branches, known as the right and left bronchus. The combination of these two bronchi is known as bronchioles. In clusters of tiny air sacs, known as alveoli, these two-bronchus end and are directly connected to the lungs. The alveoli are encircled by tiny and thin-walled blood vessels that are known as capillaries. Deep inside the lungs, oxygen diffuses through the alveoli walls and capillaries. While gaseous wastes are produced in the blood, particularly carbon dioxide. The cells will not get a constant supply of vital oxygen when something prevents it from reaching the alveoli. The asthma attacks happen when either a bronchi or bronchioles go inflamed by reducing the passage by which the air passes through the lungs.

**Causes**

Asthma is viewed because by a combination of environmental and genetic factors. By airway hyperresponsiveness, asthma attacks are caused. This is an overreaction of either bronchi or bronchioles to different physiological or environmental impetuses, that are called triggers. There are extremely small causes of asthma and tiny particles carried through the air. This air is inhaled into the lungs and when this enters the lungs than its name changes into environmental triggers. Now the lightweight particles are known as environmental triggers that result in an inflammatory response in the airway walls. On the other hand, to some people these environmental particles are known as allergens. Usually, these allergens are natural substances, like animal dander, mold spores. Moreover, fecal material from cockroaches and dust mites. The allergens bring embroidered responses of the immune system by which an antibody, known as immunoglobulin E, starts an inflammatory response.

Asthma happens to the people without allergies where chemical irritants trigger an inflammatory response. This starts differently than allergen-triggered asthma. Such as certain common chemicals irritate some people while other not that include household cleaners, cosmetics, hairspray, and perfume. Other chemicals include plastic and industrial waste including different kinds of air pollution such as sulfur dioxide, wood smoke, car exhaust, and exposure to high levels of ozone. But not all the triggers are environmental, there are in fact physiological triggers such infections, the common cold. Sometimes the substances enter through food or water people drink.

**Symptoms**

From person to person the symptoms of asthma and there can be frequent attacks of asthma. People can have symptoms when they exercise, or it could be all the time. The asthma symptoms include chest pain or tightness, shortness of breath, trouble sleeping caused by wheezing, coughing, and short of breath. Moreover, a wheezing or whistling sound when exhaling, however, wheezing is the most common symptom of asthma. In addition, coughing or wheezing attacks that deteriorated by a respiratory virus such as the flu and a cold.

Asthma symptoms and sign are more bothersome and frequent that increase difficulty in berating or when people frequently use the quick-relief inhaler. Exercise-Include asthma is worse than the flu and cold. While occupational asthma usually activated by workplace irritants such as dust, gases, or chemical fumes. Mostly, children suffer from asthma before turn five. It could be difficult for doctors and parents to recognize asthma. As the bronchial tubes in children are already narrow and small. While chest colds and head colds. However, there could be other possible reasons the irritating in the tubes.

**Medical Treatment**

However, there is no cure but there are effective treatments through which the attacks can be prevented or controlled. The medications are inhaled in vapor form using a metered-dose inhaler, taken orally or a hand-held pump that delivers treatment straight to the airways. Asthma medical treatments are of two kinds: anti-inflammatory medication and bronchodilators. Anti-inflammation reduces airways while bronchodilators reduce bronchospasm. Asthmatics can measure their peak expository flow rate (PEFR) for controlling the asthma attacks before they start.

For controlling sudden asthma, bronchodilators are extensively referred to medical treatment by preventing asthma attacks brought on by exercise or physical activity. They work straight on sites know as beta-receptors and that are involved in small muscle bands surrounding the airways. The airway dilates, and the muscles relax when these drugs attach to the beta-receptors. Anti-inflammatory medical treatment work cardinally by interfering with the chemistry of immune cells and the activity like mast cells that origin irritation in the airway walls. Moreover, anti-inflammatory medical treatment helps in relaxing the airway muscles which constrict while bronchospasm. Asthma symptoms are condensed by corticosteroids by suppressing the immune response.

**Asthma Prognosis**

In adults the prognosis the asthma disease is scarce particularly in adults and is not well described (Markowe et al.). however, there is a possibility of its complete remission and these remission rates are either limited or low to the milder cases. In some asthmatic patients, permanent lung function impairment develops and the chances of this are increased to the people who smoke. Longitudinal studies conclude that severe asthma has a weak prognosis with regard to both hospitalization and expansion of permeant lungs function (Markowe et al.). Due to an increased risk of death from lungs disease, the risks of death increase twice.

Available literature concludes that many patients with long-term follow observation on children have reported that 449 seen with asthma when they followed up after twenty years (Buffum and Settipane). Out of those, 52.1 percent seemed to be cured while another 19.3 percent had no signs till they evaded the offending cause (Buffum and Settipane). Majority of the asthmatic patients suffered from dyspnea on excretion. The results suggest that some of these patients have permanent chronic bronchitis or permanent emphysema.

**Recommendations and Special Dietary Restrictions**

There are no decisive that a precise diet influences the frequency strictness of asthma attacks. But eating fresh foods would possibly improve the overall health of an asthmatic patient. There can be a possible relationship between eating fresh, nutritious foods to processed foods that may increase the possibility of Asthma. In this regard, more studies are required as there is not a single food that improves asthma symptoms. But the asthmatic patients need to benefit taking well-rounded diets such as vegetables and fresh fruits. As food relates to allergies it comes into play. Food intolerances and food allergies happen when a patient’s immune system exaggerates to precise proteins in foods.

On the other hand, obesity is another possible factor that develops asthma and people with obesity are more severe to be treated. In this regard, a balanced diet is highly recommended to the asthmatic patients through which it will be easier to manage the conditions. The foods need to be added in the diet such as eggs and milk that include vitamin D and leafy greens that include Beta carotene. Moreover, magnesium-rich food like pumpkin seeds and spinach. The number of asthma attacks would possibly be decreased by getting enough vitamin D. The patient should avoid eating the allergic foods that increase asthmatic attack.

**Conclusion**

Approximately 300 million people have been affected by asthma around the world and counts for one in every 250 deaths (Jennifer E). In fact, it has significantly recognized by the World Health Organization (WHO) that asthma is a major health issue that has been affecting the people of all ages. The patients, in this regard, needs to be evaluated and triaged immediately. The asthma treatment needs to be base on recognition of life-threatening, severe or moderate exacerbation. Clinicians need to recognize the risk factors, sign, and symptoms along with comorbidities for life-threatening and severe exacerbations. The primary treatment of asthma includes SCSs, SABAs and oxygen administering. While if an asthmatic patient is unable to sustain high dose ICS and SCS could be initiated in selected patients.

Works Cited

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