

Let's Talk About Asthma.

"Please there is a breakable stuff in that bag" Thonia said as she handed her bag to the motor boy at the AKTC motor park. She was on her way to Lagos to purchase goods for her new boutique shop.

No sooner had the bus took off than she began to cough. She coughed repeatedly to the point that the passengers on board could not but noticed that something was definitely wrong. When asked by a co- passenger about the cause of the cough, Thonia said in between breath that she was asthmatic and had been at a party all night. She was with her friends that smoked cigarettes till day break. To add insult on injury, she forgot her inhaler while rushing to meet up with the bus. The more she tried to suppress the cough reflex, the worse it became. At a point the passenger sitting next to her had to announce to the driver that they were dealing with a medical emergency. The driver was instructed to drive to the nearest pharmacy shop or a hospital where help could be sought. There was one problem however, it was early in the morning and most shops were yet to open.

Everything was happening so fast, Thonia was finding it difficult to breath, something just had to be done, there had to be a help or she would die. The driver tried to put more pressure on the pedal; he overtook every vehicle on the way, jettisoning all the traffic rules.

Just has all hoped seemed to have been dashed for Thonia, they came across FRSC on the road. One of the passengers suggested the driver should ask for their help. Luckily for her, there was a Hydrocortisone injection in the emergency box. She was given a dose of the drug, which obviously bought her a good time before she was rushed to the nearest hospital. The rest of the passengers continue with their journey while Thonia was admitted in the hospital for a proper management. She called on her relatives who met her in the hospital.

She promised herself never to be so careless again and to avoid smokers like plaque.

Introduction

We have all at one time or the other had a friend, co worker, sibling or neighbor who often complained of problem with breathing. This group of people at some point found it very difficult to breathe and may need the aid of a special medication to breathe. If help does not get to this people on time, they could end up dead. This is acute asthmatic attack.

Today we shall be talking about bronchial asthma. This is one disease that concerns everybody either you are a sufferer or not. In fact it is more important to you if you are not a sufferer because sometimes the life of a sufferer may depend on you. For this reason however, it is pertinent for everyone to be well informed about the disease.

HISTORY

Ancient Egypt

We know that asthma existed in ancient Egyptian times, and there is some evidence that asthma has been around even before that. The George Ebers Papyrus - found in Egypt in the 1870s - contains prescriptions written in hieroglyphics for over 700 remedies. One of the ancient Egyptian remedies was to heat a mixture of herbs on bricks and inhale their fumes.

China

A few hundred years ago it was common in China to give a person with asthma herbs containing ephedrine from which they could inhale beta-agonists.

Term Asthma Comes From Greek *Aazein*

The term Asthma comes from the Greek verb *aazein*, meaning to pant, to exhale with the open mouth, sharp breath. In *The Iliad*, a Greek epic poem (attributed to Homer) describing the siege of Troy, the expression *asthma* appeared for the first time.

The *Corpus Hippocraticum*, by Hippocrates, is the earliest text where the word asthma is found as a medical term. We are not sure whether Hippocrates (460-360 BC) meant asthma as a clinical entity or as merely a symptom. Hippocrates said spasm linked to asthma were more likely to occur among anglers, tailors and metalworkers.

Aretaeus of Cappadocia (100 AD), an ancient Greek master clinician, wrote a clinical description of asthma. Galen (130-200 AD), an ancient Greek physician, wrote several mentions of *asthma* which generally agreed with the Hippocratic texts and to some extent those of Aretaeus of Cappadocia. He described asthma as bronchial obstructions and treated it with owl's blood in wine.

Moses Maimonides (1135-1204 AD), the rabbi and philosopher who lived in Andalusia (Spain), Morocco and Egypt, was also a physician who practiced medicine in the court of Sultan Saladin of Egypt and Syria. Among many medical texts, Maimonides wrote *Treatise of Asthma* for Prince Al-Afdal, a patient of his. Maimonides revealed that his patient's symptoms often started as a common cold during the wet months. Eventually the patient gasped for air and coughed until phlegm was expelled. He noted that the dry months of Egypt helped asthma sufferers. Maimonides also suggested avoidance of strong medication, plenty of sleep, fluids, moderation of sexual activity, and chicken soup.

Jean Baptiste Van Helmont (1579-1644 AD), a physician, chemist and physiologist from Belgium, said that asthma originates in the pipes of the lungs.

Bernardino Ramazzini (1633-1714 AD), known to some as the father of sports medicine, detected a link between asthma and organic dust. He also recognized exercise-induced asthma.

At the beginning of the 20th century asthma was seen as a psychosomatic disease - an approach that probably undermined any medical breakthroughs at the time. During the 1930s to 1950s, asthma was known as one of the *holy seven* psychosomatic illnesses.

Asthma was described as psychological, with treatment often involving, as its primary component, psychoanalysis and other 'talking cures'. A child's wheeze was seen as a suppressed cry for his or her mother. Psychoanalysts thought that patients with asthma should be treated for depression. This psychiatric theory was eventually refuted and asthma became known as a physical condition.

Asthma, as an inflammatory disease, was not really recognized until the 1960s when anti-inflammatory medications started being used.

INTRODUCTION

Asthma is a chronic inflammatory disorder of the airways in which many cells and cellular elements play a role. It is associated with airway hyper responsiveness that leads to recurrent episodes of symptoms.

Asthma is one of the most common chronic diseases in the world. It should be noted that about 300million people worldwide suffer from the disease. The disease cut across all ages, sex, and geographical regions.

The disability adjusted life year (DALYS) lost due to asthma worldwide was estimated in 2001 to be 15 million per year. Worldwide about 100,000 deaths is estimated yearly, while in Nigeria, a research conducted by Elegbeleye in LUTH shows mortality of 6% in 10 years (1965-1974) and 4.9% in ife by Erhabor et al (1995-1994).

How does one become a sufferer?

It can be inherited from the parents or acquired after one has been borne.

Asthma has been shown to run in the family. For people suffering from asthma, it is important to know if there is previous history of allergy in the siblings. Allergy is a spectrum that ranges from skin rashes, persistent itching of the eyes with or without conjunctivitis (vernal). There could also be recurrent catarrh, what we called allergic rhinitis. Some people may also exhibit repeated sneezing as their way of reacting to an unsuitable situation.

It has also been found that when a patient is inflicted with a virus known as respiratory syncytial virus in the earlier days of life, such a patient often comes down with asthma later in life.

How does it happen?

In a simple word, when an individual that is asthmatic is exposed to the allergen, there will be some chemical response in the airway that causes swelling of the muscles of the airway, narrowing of the airway, and secretions of thick mucus in the lumen of the airway. These three factors are responsible for the difficult air entry and sound heard in asthma. Think of this as a windpipe where you can blow in air freely. Now imagine what happens when such pipe is now stuffed with several particles only to live a narrow space. You will see that blowing air into such pipe becomes a very difficult task.

CLINICAL SYMPTOMS

People suffering from asthma can live a near normal life without any signs or symptoms to show the disease. Signs and symptoms appear when there is a trigger that stimulates the response in the airway. Asthmatic attacks could be mild when the symptoms are not severe and the difficulty in breathing is still minimal. It could also be severe in which case breathing becomes difficult and the patient gasps for air. The peak of all these is the life threatened asthma, at this point; the patient's breathing system collapsed.

Generally, signs and symptoms of asthma are; cough, which is usually dried, non productive of sputum and worse at nights. There is also difficulty in breathing which will be like there is no air in the room. Patients also present with chest tightness which he often describes like something is 'hooking' him in the chest. Other symptoms are body weaknesses, lethargy, there could be fever in children and feeling of malaise. There is also wheezing which is a whistling sound that people heard in patient with asthma. When a doctor listens to the chest with his stethoscope, most times he hears a whistling sound called rhonchi except in the life threatened asthma where you have 'silent' chest. Other signs in life threatened asthma include cyanosis, extreme dyspnoea and conversing in monosyllabic words.

Risk factors

Like you read earlier, most times asthma could be linked to gene in the family. Other risk factors identify includes; children, who have low birth weight, are exposed to tobacco smoke, are black, and are raised in a low-income environment. Others are, premature birth, mothers that smoke in pregnancy, obesity, children delivered via cesarean section, people working in certain industry where there is air pollution etc.

Triggering factors.

The factors that can trigger asthmatic attacks differ in individuals. However each sufferer should try as much as possible to identify his or her own factor.

Generally, the following has been described as the allergens responsible for asthmatic attacks; dust, sharp perfumes, extreme weather condition, fumes which could be from stoves, candle, lantern and generator. Use of rug in the house has been implicated too. Those who keep pets could also be affected.

Asthmatic patients have been advised not to fry food item as this could be the trigger in some people.

Exercise could also be a problem in some cases, especially, extreme exercise.

Diagnosis

Asthma is diagnosed from history of the disease and the examination of the patient. As part of the examination, the peak flow rate could be measure using the peak flow meter. Values less than 50% of the expected indicate a severe attack.

Chest x-ray will only diagnose asthma if the attack is on going from which you see hyperinflation of the lung field. It can also rule out other chest problems like pneumothorax.

Other tests include pulse oximetry, arterial blood gas, exercise stress test etc.

Treatment

The treatment of asthma is basic depending on the severity. For mild cases, the use of salbutamol inhaler or other inhalers are advocated. When severe, patient is best managed in the hospital where he can be nebulized with salbutamol, intranasal oxygen and then placed on steroids. When this is not working, intravenous aminophylline could be used.

A new drug that shows a lot of potential in the treatment of asthma is quilizumab which have proven effective in some clinical trials.

Complication.

The greatest complication of asthma is death.

Conclusion

It is important that every case of asthma should be treated as emergency.

Friends and family of sufferer should be aware of the patient's condition and should try to avoid the triggering factors. They should know how to recognize the symptoms early and what to do to assist.

In case of any emergency call the health centre hotline on

07057595713

Staff writer

Dr Daso O Samuel

Medical Officer

AAUA Health Centre

Editor in Chief

Dr Aiyejumoh

Director of Health services

AAUA Health Centre

