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Gastroesophageal Reflux Disease (GERD)

About 19 million Americans suffer from *gastroesophageal reflux disease (GERD)*, also known as *GER* or *acid reflux disease*. In many it could be silent and the patient may not be aware of the problem unless treated or tested. In this article we will see how GERD could cause respiratory symptoms such as chronic cough, persistent hoarseness, and laryngeal spasm and make preexisting asthma worse. During human development before birth, both lungs and esophagus and stomach develop from a common primordial tube. Therefore it is not surprising that one can influence the other significantly.

What is GERD?

Ingested food travels from mouth to stomach through a long tube known as esophagus which lies in the chest cavity behind heart and lungs. In GERD the ingested food mixed with acid from the stomach regurgitates back into esophagus usually after meals and especially during night on lying down. This may produce such familiar symptoms as heart burn, burping and belching, water brash or chest pain/ discomfort. There is a sphincter (check valve) at the lower end of esophagus and in people with reflux it gets weaker and allows the food to travel both up and down rather than down only. If you get the above symptoms twice or more in a week, then you have GERD. If left untreated, GERD can lead to more serious health problems.

How does GERD influence asthma and chronic cough?

Up to 89 percent of patients with asthma also experience GERD. There is some debate as to the role of GERD in asthma. One view is that the presence of reflux in patients with asthma is incidental due to high negative pressures that develop inside the chest in asthmatics during breathing. This negative pressure pulls up the stomach contents into chest through esophagus. Others believe that severe, chronic, and treatment-resistant asthma is more likely to be aggravated by GERD. Treatment of GERD with acid-reducing medications is often beneficial for asthma symptoms, which helps to confirm the link between the two conditions. Vagus nerve from the brain supplies esophagus/ stomach and lungs. Acidic stomach contents on reaching the esophagus irritate vagus nerve endings there and it causes reflex bronchoconstriction in the lungs, also mediated by the vagus nerve. In one study involving children with asthma and GERD, adequate treatment of GERD for one year resulted in significant reduction in the need for asthma controller medications in the majority of study subjects.

If you experience any of the following situations, it could indicate that you have asthma and GERD together: increased asthma symptoms after meals or exercise; increased asthma symptoms during night (initiated by lying down); respiratory symptoms such as frequent coughing and hoarseness; recurrent pneumonia or development of scar tissue in the lungs. In up to 20% of patients with chronic cough, GERD is responsible for the cough and adequate treatment of GERD will result in significant improvement of the cough.

How is GERD diagnosed?

The following tests are used to diagnose GERD: *esophageal pH monitoring*, *gastroesophageal scintiscanning* or *upper gastrointestinal tract endoscopy*. The last is considered the gold-standard. Your physician may also search for *Helicobacter pylori*, a bacterium that thrives in the acid environment of the stomach. This bacterium is implicated in GERD and peptic ulcer disease. If found, adequate treatment of the infection results in cure!

How is GERD treated?

The following measures will help treat GERD: If you are overweight, losing weight by diet and exercise will certainly help; avoiding tobacco, alcohol, spicy food and medications such as aspirin, ibuprofen, naproxen or Celebrex; minimizing stress if possible by relaxation techniques; not eating any food for three hours before going to bed; keeping the head end of bed elevated by 45 degrees; taking over the counter antacids or acid-reducers such as Zantac, Pepcid or Tagamet or Prilosec following manufacturer's recommendations and after getting approval from your physician and if you have severe disease, then taking prescription medications such as Prevacid, Nexium, Protonix, AcipHex etc. These medications known as Proton Pump Inhibitors (PPIs) are best taken on empty stomach in AM. Referral to a gastroenterology specialist may be required at times.

If treated adequately, your acid-peptic symptoms will get better and you will have better control of asthma and better quality of life and sleep. You may have to stay on treatment for several months while you are monitored by your physician. Unless the underlying factors are taken care of, the symptoms may recur once you stop the treatment. In extreme cases your doctor may recommend surgery to correct the problem.

What could happen if GERD is left untreated?

Untreated or undertreated GERD could result in the following complications in the long run: Gastrointestinal bleeding and anemia; Swallowing difficulties from formation of strictures or scar tissues which may require dilatation at regular intervals using special instruments and rarely a condition called Barrett's esophagitis which is associated with development of esophageal cancer.

About the author:

Natarajan Asokan, M.D., F.A.A.P. is a board certified allergist and immunologist and a board certified pediatrician with over 25 years of experience as a physician and 7 years of experience as a practicing allergist & immunologist. He treats adults and children with various allergy & immunology problems. He can be reached at 1739, Beverly Ave, Suite 118, Kingman, AZ 86409, and Tel: 928-681-5800, Fax: 928-681-5801, or www.trinityallergy.com