BBC

'Late' asthma research unearths potential new treatment

Scientists have stumbled on a potential new treatment for delayed asthma attacks which can occur several hours after exposure to allergens, a study shows.

A team from Imperial College London found that blocking sensory nerve functions stopped a "late asthmatic response" in mice and rats.

Around half of people with asthma experience delayed symptoms.

The charity Asthma UK says the research could help the understanding of asthma.

Writing in the journal Thorax, researchers say the late asthmatic response happens because the allergen triggers sensory nerves in the airways.

These nerves then set off a chain reaction which causes the release of neurotransmitter acetylcholine, which causes the airways to narrow.

If these findings translate to humans, it will mean that drugs called anticholinergics - which block acetylcholine - could be used to treat asthma patients who suffer from delayed attacks.

These attacks can often happen at night, three to eight hours after the sufferer comes into contact with grass pollen or house-dust mites, for example.

A typical early asthmatic response occurs within an hour of exposure to allergens.

At present, steroids are the main treatments for asthma but they are not effective for all patients.

**Connections**

Professor Maria Belvisi, lead researcher from the National Heart and Lung Institute at Imperial College London, said they realised the importance of sensory nerves in triggering symptoms by chance.

"We wanted to do the research on anaesthetised rats, but we couldn't because the late response had been blocked by anaesthetising them.

"We stumbled upon it. Now we want to work out how allergens trigger these nerves, because we don't know the exact connections."

The data produced by the study suggests that anti-cholinergic therapy may be effective in patients that observe a late phase response to allergen.

Separate recent clinical studies also showed that an anti-cholinergic improved symptoms and lung function in asthma patients.

Charity Asthma UK says 5.4 million people in the UK have asthma and it can affect people at any age.

Dr Samantha Walker, director of research and policy at the charity, said: "This research seeks to understand the causes of chronic asthma symptoms and may pave the way for identifying new treatments for people with asthma in the future."

The study was funded by the Medical Research Council.

Sunday Sun (UK)

August 14, 2011   
1st Edition

New treatment may stop **asthma** attacks  
  
**SECTION:** FEATURES; Pg. 15  
  
**LENGTH:** 209 words

A NEW treatment could prevent delayed **asthma** attacks, which can occur several hours after exposure to allergens, a study showed yesterday.

Research led by scientists from Imperial College London could explain why around half of people with **asthma** experience a "**late phase**" of symptoms.

Scientists found that blocking sensory nerve functions stopped a "late asthmatic response" in mice and rats.

The findings, published in the journal Thorax, could lead to better treatments for the disease, researchers said.

An estimated 300m people suffer from **asthma**.

Symptoms are commonly triggered by allergens in the environment, such as pollen and dust mites, and these stimuli can cause the airways to tighten within minutes, causing breathing difficulties.

Many sufferers also experience a "late asthmatic response" three to eight hours after exposure to allergens, causing breathing difficulties of up to 24 hours.

When sufferers have an "early response", the allergen is recognised by mast cells, which release chemical signals that cause airways to narrow.

The mechanism behind the **late phase** has remained unclear but scientists found evidence ion rats that the late asthmatic response happens because the allergen triggers sensory nerves in the airways.