



AMERICAN COLLEGE OF GASTROENTEROLOGY

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Increased Incidence of Gastroesophageal Reflux Symptoms Among 9/11 World Trade Center Survivors Worsened Their Health-Related Quality of Life

Health Care Providers Urged to Recognize Links Between GERD and Psychological, Respiratory Conditions and Consult Guidelines for Coordinating Physical, Mental Health Care

Washington, DC (September 6, 2011) – Increased incidence of gastroesophageal reflux symptoms (GERS) reported by a large population of 9/11 World Trade Center attack survivors, most of whom had not reported any GERD-related symptoms prior to 9/11, worsened the health-related quality life for many rescue and recovery workers, lower-Manhattan residents and local workers who were exposed to the dust cloud and other contaminants in the aftermath of 9/11, according to a study published online today in *The American Journal of Gastroenterology*.

Post-9/11 or persistent reflux symptoms may pose a potential burden on health care resources and likely deepen the impairment of health-related quality of life for the WTC-exposed population that was already impacted by other health effects arising from the 9/11 disaster according to findings reported by researcher Jiehui Li, PhD, New York City Department of Health and Mental Hygiene. Li and his co-investigators also concluded that clinicians need to be sensitive to the close association among the three conditions and the strong possibility that patients with 9/11 GERD may have comorbid respiratory or mental health problems.

“Health care providers should also be aware of published clinical guidelines for treatment of persons exposed to the WTC disaster which contain recommendations for coordinating physical and mental health treatment,” wrote Li.

The study found that that post-9/11 persistent GERS was independently associated with 9/11-related exposures when people with asthma or PTSD were excluded. The study also found that the cumulative incidence of post-9/11 persistent GERS was positively associated with higher-

intensity 9/11-related exposures—such as prolonged exposure to the dust cloud—compared with lower exposures.

While there is considerable evidence that asthma and posttraumatic stress disorder (PTSD) were caused by WTC exposures, findings also establish that disaster-related environmental exposures may contribute to the independent development of gastroesophageal reflux symptoms (GERS).

In this retrospective analysis of more than 37,000 adults exposed to the WTC attacks who reported no pre-9/11 GERS —symptoms indicative of GERD—and participated in two surveys after 9/11. Li and colleagues examined new onset GERS since 9/11 and persisting up to five to six years in relation to 9/11-related exposures and potential associations with asthma and PTSD.

Cumulative incidence was 20% for post 9/11 GERS and 13% for persistent GERS. Persistent GERS occurred more often among those with comorbid PTSD (24%), asthma (13%), or both (36%) compared to neither comorbid condition (8%). Among study participants with neither asthma nor PTSD, the adjusted risk ratio for persistent GERS was elevated among workers arriving at the WTC pile on 9/11 or working at the WTC more than 90 days; among residents exposed to the intense dust cloud on 9/11; or who did not evacuate their homes; and among area workers exposed to the intense dust cloud.

The independent association between 9/11 exposures and GERS are likely due to several possible factors, according to the researchers. They indicated that the ingestion of 9/11 contaminants may have directly resulted in gastroesophageal injury. In addition, sub-syndromal psychological distress may have been also been a factor in those that did not have GERS prior to 9/11 exposure.

Effects of World Trade Center Cleanup Still Being Felt

Previous studies have suggested that ingestion of alkaline materials in the dust cloud was a possible cause of new or worsening GERD in WTC-exposed firefighters. Alkaline cement dust, one of the major components of WTC dust, has been associated in occupational studies with both adverse respiratory outcomes such as asthma and reflux-like dyspepsia.

Shortly after September 11, 2001, high frequencies of gastroesophageal reflux (GERD) and mental health disorders (MHD) were reported among exposed World Trade Center (WTC) responders. Dr. Douglas Brand and Dr. Yvette Lam were part of a team at the Long Island WTC Responder Center that examined the results of 697 WTC responders who were seen in 2005 to

determine whether these conditions persisted over time and whether they were related to one another.

Among these responders, 41 percent of those examined had GERD, more than twice the 20 percent incidence rate among the general population. Furthermore, patients with GERD also had a higher prevalence of mental health disorders, including Post-Traumatic Stress Disorder and depression.

The researchers also evaluated other environmental and lifestyle factors commonly associated with GERD, including smoking and obesity, but found no association with the increased frequency of GERD among WTC workers. However, length of exposure at the WTC site correlated with the diagnosis of both PTSD and GERD.

“Our data is consistent with prior studies showing a higher likelihood for asthmatics to develop GERD than non asthmatics and with studies showing an increased propensity for patients with psychological symptoms also to report GERD symptoms,” wrote Li.

About the American College of Gastroenterology

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