Lung damage from gasoline siphoning assessed with chest CT

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Using CT, Korean researchers have been able to accurately locate and diagnose damage produced in the lungs of patients who have accidentally swallowed fuel while siphoning it from car tanks.

Fuel ingestion can lead to nasty gastrointestinal symptoms, but aspiration pneumonitis is its most potentially lethal complication, followed by complications to the central nervous and cardiovascular systems. Several case reports with radiographic evidence exist on hydrocarbon-induced pneumonitis in fire-eaters. However, according to the investigative team from Pusan National University School of Medicine, led by radiologist Dr. Mi Seon Yi, the specific features of hydrocarbon pneumonitis after fuel siphonage have not been described in the clinical literature.

Yi and colleagues identified five patients with hydrocarbon pneumonitis who underwent chest CT at their institution from August 1997 to July 2008. These patients had accidentally aspirated diesel fuel while siphoning it from car tanks and presented to the emergency room with cough, dyspnea, and fever. Three of them had chest pain and one was admitted with hemoptysis. The investigators had speculated that CT findings of hydrocarbon pneumonitis in these patients would be different from those in fire-eaters. Fuel siphonage patients usually suffer the accident while bending forward. Fire-eaters, on the other hand, always perform in a standing position. Their type of pneumonitis involves mostly the lower lobes of the lungs.

CT findings confirmed the researchers' theories. Although hydrocarbon pneumonitis after fuel siphonage involved mostly both lungs, the condition led to necrotic air-space consolidation predominantly in the right middle lobe. They published findings in the October issue of the American Journal of Roentgenology (2009;193[4]:1118-1121).

According to the National Capital Poison Center in Washington, DC, poisoning by fuel ingestion is one of the most common household accidents in the U.S. Ironically, its frequency increases when gas prices become harder to digest. News stories from 1979 and 2008, when fuel prices skyrocketed, reported hundreds of patients presenting to emergency rooms with accidental poisoning from fuel siphoning. Adding CT findings to the clinical assessment could be useful for accurate diagnosis of hydrocarbon pneumonitis, investigators wrote in their report.

Disclosures:

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