黄砂と急性心筋梗塞
(Late Breaking Registry Session, Abstract 4968)

高齢慢性腎臓病患者は砂塵嵐後の心筋梗塞罹患リスクが最も高い

Elderly with chronic kidney disease are most vulnerable to myocardial infarction following dust storms

黄砂(AD)塵が日本の熊本県に飛来すると、その後24時間以内にこの地域の病院において急性心筋梗塞(AMI)患者が急増し、現在では新たな予測方法がリスクの最も高い患者を正確に識別するのに役立っている。AD関連AMIのリスクファクターは、75歳以上、男性、高血圧、糖尿病、脂質異常症、喫煙、および慢性腎臓病(CKD)などであった。研究者らはそれぞれのリスクファクターの点数を割り当て、その結果、CKDがAD関連AMIと最も有意に関連があることを明らかにした。この研究結果は2017 ESC Congress で発表され、*EHJ* に掲載された。

Full Text

When Asian dust clouds blow in to Japan's Kumamoto Prefecture, hospitals in the region handle a surge of acute myocardial infarctions (AMI) in the following 24 hours, and now a new prediction tool could help pinpoint which patients are at greatest risk.

According to research presented at ESC Congress today and published in *EHJ*, elderly people with certain pre-existing conditions are most vulnerable to the phenomenon, and use of a simple scoring system could help identify the best candidates for prevention, reported Dr. Sunao Kojima, PhD from Kumamoto University, in Kumamoto City.

"Our results provide strong evidence to emphasize health education and communication with patients at risk for AMI during Asian dust storms," he said.

For centuries, Asian dust (AD) originating from mineral soil in the deserts of northern China has blown across East Asia, depositing a yellow blanket across much of Korea and Japan.

Increasingly, along with the fine sand, chemical pollutants and bacteria are caught in the flow, exacerbating respiratory and cardiovascular diseases (CVD).

Researchers from the Kumamoto Acute Coronary Events (KACE) study group analyzed 3,713 consecutive AMIs in patients from 21 hospitals in the 7,400 km² Kumamoto Prefecture between April 1, 2010 and March 31, 2015.

There were 41 AD storms during the study period, and after controlling for temperature, humidity, air pollutants and data on influenza epidemics, the investigators showed that AMIs were 45% more likely to occur in the day after an AD storm compared to non-AD days.

Risk factors for AD-related AMI included age 75 years or more, male sex, hypertension, diabetes mellitus, dyslipidemia, smoking, and chronic kidney disease (CKD).

They assigned each risk factor a score and found that CKD was the most significantly associated with AD-related AMI.

"People at risk for AD-related AMI should try not to go out so much when Asian dust occurs," advised Dr. Kojima. He suggested N95 or DS2 respiratory masks may be useful outside, and use of vacuum cleaners, and air purifiers with high efficiency particulate air (HEPA) filters may also help inside.

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Conference News