

Banned chemical weapon VX is potent killer that lingers

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A police officer checks his phone inside the forensic department at Kuala Lumpur Hospital in Kuala Lumpur, Malaysia Friday, Feb. 24, 2017. The banned chemical weapon VX nerve agent was used in the murder of Kim Jong Nam, the North Korean ruler's outcast half brother who was poisoned last week at the airport in Kuala Lumpur, police said Friday. (AP Photo/Daniel Chan)

The banned chemical weapon VX is considered by some experts to be the nastiest of the nasty nerve agents known to exist. With a consistency

similar to motor oil, it lingers for long periods in the environment and even a tiny amount causes victims' bodies to flood with fluids, producing a feeling of drowning before death.

So when Malaysian authorities announced Friday that VX was to blame for the Feb. 13 death of the North Korean leader's exiled half brother inside a busy Kuala Lumpur airport, it raised nearly as many questions as answers.

First, with a substance so potent, how is it possible that the two women who allegedly attacked Kim Jong Nam with it could have survived? Second, given that particles can remain in the environment for possibly weeks after being released, why didn't the airport undertake specialized decontamination measures to ensure the public's safety?

"The other chemical agents like sarin, tabun, those kinds of things, they're way below this. They're toxic, yes, but this is the king," said John Trestrail, a U.S. forensic toxicologist who has examined more than 1,000 poisoning crimes.

He said an amount of VX weighing two pennies could kill 500 people through skin exposure. It's also hard to acquire and would likely have come from a chemical weapons laboratory, making it more likely that the attack was executed by a government. Police are seeking the second secretary of North Korea's embassy in Malaysia, but embassy officials have vehemently denied any involvement.

He and other experts stressed the importance of having the results confirmed by an independent reference laboratory, especially given the nerve agent's rarity.

VX is an amber-colored, tasteless, odorless chemical weapon first produced in the 1950s. When inhaled or absorbed through the skin, it

disrupts the nervous system and causes constriction and increased secretions in the throat, leading to difficulty breathing. Fluids pour from the body, including sweat, spontaneous urination and defecation, often followed by convulsions, paralysis and death. Kim Jong Nam sought help at the airport clinic and died en route to a hospital within two hours of being attacked, police said.

An antidote, atropine, can be injected after exposure and is carried by medics in war zones where weapons of mass destruction are suspected.



Police officers guard the main gate of forensic department at Kuala Lumpur Hospital in Kuala Lumpur, Malaysia Friday, Feb. 24, 2017. The banned chemical weapon VX nerve agent was used in the murder of Kim Jong Nam, the North Korean ruler's outcast half brother who was poisoned last week at the airport in Kuala Lumpur, police said Friday. (AP Photo/Daniel Chan)

But Bruce Goldberger, a leading toxicologist who heads the forensic medicine division at the University of Florida, questions how no one else fell violently ill in the attack on Kim Jong Nam, who had been living abroad for years after falling out of favor with his family, including North Korean leader Kim Jong Un.

The two women—one Vietnamese, one Indonesian—recorded on surveillance cameras thrusting a substance into Kim Jong Nam's face as he was about to check in for a flight home to Macau, apparently did not suffer serious health problems. Malaysian police have said they were not wearing gloves or protective gear and that they washed their hands afterward as they were trained to do. However, authorities said Friday that one of them vomited afterward.

Both have been arrested along with another man. Authorities are also seeking several others, including an employee of North Korea's state-owned airline, Air Koryo.

"If they used their bare hands, there's just no possible way that they would have exposed him to VX unless they took some sort of precaution," Goldberger said. "The only precaution I know of would be administration of the antidote before this went down."

No passengers, airport workers or medical personnel who tended to Kim Jong Nam at the clinic or hospital have been identified as having been sickened. Tens of thousands of passengers have passed through the terminal at Kuala Lumpur's airport, used by budget carriers such as AirAsia, since the apparent assassination was carried out a week and a half ago.

No areas were cordoned off and protective measures were not taken. When asked about it a day after the attack, airport spokesman Shah Rahim said there was no risk to travelers and the airport was regularly

and properly cleaned. But officials announced Friday that the facility would be decontaminated.

"It's as persistent as motor oil. It's going to stay there for a long time. A long time, which means anyone coming in contact with this could be intoxicated from it," Trestrail said. "If this truly is VX, they ought to be calling in a hazmat team and looking at any place these women or the victim traveled after the exposure."

VX, which is banned under the Chemical Weapons Convention, has been used before. The Japanese religious cult Aum Shinrikyo used the nerve agent in the 1990s, killing one victim they believed was a police informant.

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