Time Needed to Identify Remains as Keller’s Not Surprising, Expert Says

In the case of a burn victim, the identification process can sometimes be painstaking, according to Loyola prof.

By Karen Sorensen

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Determining someone's identity via remains so badly damaged it's not clear they were once human is not nearly as easy as "CSI" would have you believe, one expert says.

Although Dr. Anne Grauer is not involved in the work to confirm the burned remains found in DeKalb's Prairie Park are those of missing Northern Illinois University student Antinette "Toni" Keller of Plainfield, she said she's not necessarily surprised it's taking more than two weeks to get a positive verification.

That it took more than a week just to determine they were, in fact, human remains offers a clue into what police have to work with, said Grauer, an anthropology professor at Loyola University Chicago.

Typically in the case of a burn victim, bone fragments can be reconstructed in a way that allows forensic scientists to determine fairly quickly if the remains they're handling are human or animal, she said.

However, it can be a far more difficult task if the bones have been altered in some way that makes that reconstruction more painstaking, she said.

Also, teeth are usually found that can be matched to dental records, Grauer said. Even one tooth in fairly good condition can be sufficient to identify someone, she said.

Most people don't realize that even when a body is cremated using intense heat, teeth often survive the process as do bone fragments, Grauer said. A crematorium will crush those remains into a powder so they are not so recognizable as human to the family members who claim them, she said.

That may be what police are dealing with here, although that's strictly conjecture and Grauer would not speculate. Police have declined to provide any details as to the state of the remains they found.

"The stakes are so high," she said. "You can't risk saying they're not human and you can't risk saying they are. You have to be certain."

Once it's determined you're dealing with human remains, the next step is determining identity.

Typically, while "the process can vary depending on the quality and quantity of DNA available," a certain amount of tissue usually remains that can undergo nuclear DNA testing in which it is compared to the genetic DNA of a family member, Grauer said.

In the case of a fire victim, that's not viable, she said. Scientists must use mitochondrial DNA, which can be obtained through bone, she said.

"This kind of (testing) is done extensively with soldiers (killed in battle)," she said.
And while the process may not necessarily be time-consuming, finding analysts with doctorates in DNA testing and genetics to do the work can be, Grauer said. In a murder case, finding someone with the expertise to do the testing, interpret the results and be able to testify in court about what they did is very important, she said.

And that's not to mention the time it might take to get a lab to process the results, she said. "Just because the test doesn't take a lot of time doesn't mean a lab can drop everything and do it right away," Grauer said.