G91 Identification of Twenty Charred Victims of a Helicopter Accident, Africa

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This presentation offers a paradigm for the identification of multiple charred bodies in situations where there is no existing medicolegal infrastructure.

This presentation will impact the forensic science community by- demonstrating how a rush to immediate autopsy is not always the best first step. A first triage including sex, size, and personal effects allowed quick matching with antemortem data.

Since each mass disaster presents unique challenges, the medicolegal response must be tailored to the circumstances at hand. Scientific standards for identification vary from country to country, often in proportion to the urgency of identification and the country's scientific capabilities.

On June 11 2007, a helicopter transporting twenty supporters of a soccer squad, among them two French nationals, ignited a couple of feet off the ground at an airport in Africa; investigation revealed that the private helicopter company was not certified to fly. The bodies, unnumbered, had been simply repatriated to local morgue. No forensic investigation were per- formed locally. The French embassy asked the french government to send a team to Africa in order to identify the french bodies and to help local government to identify their bodies. As the bodies were charred, the identi- fication procedure might include all the victims.

A seven member team of French forensic experts, including two pathologists and an odontologist, were dispatched to the scene, accompanied by half a ton of equipment; a one week mission was planned.

The first step was to petition the local judiciary to confer official status on the mission. Next, a unit of the team worked with families to organize intake of antemortem data (medical and dental history, descriptions of personal effects) and exemplars for possible DNA comparison.

A second unit worked on analyzing the bodies. A decision was made to do an intake exam to assign the bodies case numbers, determine the sex and size, then describe any personal effects. This preliminary triage facilitated more exacting processing with regards to comparison with available antemortem data (scars, prostheses, dental irregularities). With that goal, an autopsy (minimal autopsy following the Interpol procedure) with odontologic evaluation was conducted on each body, and a segment of femur retained for possible DNA testing.

On-site identification was possible for fourteen of the twenty bodies as follows: dental charting – eight bodies; radiographic comparison – two bodies; confirmation of a hip prosthesis - one body; anthropological identification of an old fracture – one body; identification by highly specific ritual scars – two bodies; fingerprints – one body. Some bodies were identified by multiple modalities. Finally, for six bodies, genetic testing was the only possible option, and was accomplished through mitochondrial DNA extracted from bone specimens sent to France packed in dry ice. Location work took one week, with DNA identification of the final six bodies completed in three weeks.

All site work was done by the specially french trained team, equipped to perform postmortem examinations without relying on local infrastructure (with the exception of access to water). This team includes police officers, crime scene investigators, forensic odontologists, and forensic pathologists, all trained in identification methods and technics.

The authors experience demonstrates that a rush to immediate autopsy is not always the best first step. In this case, preliminary triage on the basis of sex, size and personal effects allowed quick matching. Time for identifi- cation was reduced, and the bodies were rapidly released to families as identifications progressed, easing the political pressure.

Forensic, Mass Disaster, Identification

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