IDENTIFICATION OF SOLDIER HUMAN REMAINS VICTIMS OF AIRCRAFT

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In cases of massive disasters where severe fragmentation of human remains has happened, different techniques of forensic identification that involve an interdisciplinary group are used.

In the accident that implied the collision and later explosion of a Black Hawk helicopter of the Colombian army in the municipality of Pailitas, Cesar (North of Colombia), the life of the 23 occupants who conducted military operations was lost. Due to the impact and the explosion, the severe fragmentation of the human remains and the signs of calcination it became very difficult the identification of all the bodies. Nine of them were identified using traditional forensic methods (odontological, anthropological and dactyloscopic), but for the identification of the 14 remaining bodies it was necessary to resort to genetic typing.

The interdisciplinary work among professionals of the areas of Thanatology, Forensic Social Work and Genetics, allowed to correlate the pre mortem information recovered from clinical histories and families interviews, with the one obtained from the autopsies to suggest possible identifications of the corporal fragments, allowing to select this way the most suitable samples for the genetic study and to carry out a complete analysis of the closed group. 108 corporal fragments were elected for genetic analysis that included body fragments and soft tissues characterized by partial charring and deep burning. From the 14 families of the unidentified soldiers, 26 people were selected (parents, mothers or both). Blood sample for the genetic analysis were taken previous authorization. The obtained DNA of all the study samples was amplified for 16 genetic STR markers. From the analysis carried out of the human remains samples it was possible to obtain 16 genetic profiles. When comparing the information obtained with that of the relatives it was possible to identify 13 of the 14 individuals looked, with higher certainty degrees than 99.999%. We detected also 3 additional genetic profiles apparently of individuals already identified. With one of the claimant's families there was not any related sample. The results of the genetic analysis with the previous information obtained from the Forensic Social work allowed carrying out definitive outlines of autopsy and a fast individualization of the human remains identified to give back to the families.