USE OF STR TYPING IN THE IDENTIFICATION OF HUMAN REMAINS FROM COMMON GRAVES AND KIDNAPPING CASES IN COLOMBIA.

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There are nearly 2500 registered missing persons in the Colombian Government database. However, this number underestimates the magnitude of the problem since many people are afraid to report their missing relatives to the authorities. On the other hand, kidnapping is a crime that has increased in Colombia over the last years with an average of 2000 cases/year. Two cases are presented where STR typing has been used for the identification of human remains from a kidnapping case and the second from remains found in an open common grave.

Case 1: A male Caucasian individual was kidnapped in a northeast town of Colombia. Based on an anonymous tip, the authorities recovered some human remains found in a riverbank that could correspond to the kidnapped individual. The body had been cut into pieces with a machete. No skull or jawbones were found to be used for dental identification. Blood samples were obtained from the alleged father and mother of the individual. In addition, two dental pieces that have been removed and stored by the relatives before the kidnapping took place were also sent for analysis. A sample of compact bone from the recovered remains was obtained for analysis. All samples were analyzed with a battery of 9 STR (CSF1PO, TPOX, TH01, F13AO1, FES/FPS, vWA, D12S1090, D3S1744 and D18S849). The paternity/maternity was compatible with all markers analyzed. In addition total identity was obtained when compared the bone sample and the DNA obtained from the tooth.

Case 2: Human remains that belonged to more than 20 children under 11 years of age were found in a common grave near Pereira, a city located in the west Andean region of Colombia. Most of the reports for missing children in the area came from low-income families. A sample of compact bone was selected from the Femur in each case for analysis. After DNA isolation, a battery of 15-17 STRs was used in the analysis. The results allowed the genetic identification of several missing children found in the grave but the absence of relatives to cross-reference the genetic profiles obtained from other remains has not allowed completing the identification process.

The use of STR typing technology has provided us with a rapid and highly discriminating tool to study the human remains found in common graves and kidnapping cases. Due to its rapid turn around time, the ability to work with degraded DNA samples and the simultaneous analysis of several loci, STR typing technology has become the first choice test in human identification.