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THE BONES CAN TELL: SKELETAL REMAINS IDENTIFIED AFTER 11 YEARS

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The use of PCR-based DNA profiling utilizing short tandem repeats (STRs) has greatly improved positive identifications of skeletal remains. A telephone call was received by the police from a man who reported finding an old skull and two bones in the desert on one of the highways of Dubai city. Upon searching the scene only the upper part of what was believed to be human skeleton was found. Some items of clothing were found a short distance from the remains. The first rib and some vertebrae were sent to the Crime Laboratory for analysis. The first rib was ground to a fine bone powder using liquid nitrogen and a mortar. The DNA was extracted by the standard phenol-chloroform-isoamyl alcohol method with slight modifications to improve yield and reduce the presence of inhibitors. Autosomal STRs were typed using AmpFlSTR® Identifiler amplification kit (Applied Biosystems, USA), and Y chromosome STR typing was carried out using the PowerPlex® Y System (Promega Corporation., USA) following the manufacturers' recommendations. Reference blood samples on FTA cards were collected from a father whose son had been missing for 2 years. The father was excluded as a biological relative of the remains. A person reported missing for 11 years was suspected as being the remains. The biological father was dead and only a brother was available for comparison. STR analysis revealed a link. In conclusion, autosomal and Y STRs analysis combined were sufficient even though ideal reference samples were not available to identify skeletal remains.