A PUZZLE TO IDENTIFY THE CORPSE OF THE ALLEGED FATHER

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In Brazil, there are many cases of paternity with the alleged father is deceased. In most cases death occurred for over ten years. In our experience, we have found that often the bodies were not properly identified at the time to exhume a body for burial of other family members. This makes difficult to work of identifying the bones. We report a paternity case where a deceased individual was indicated as alleged father (AF) requiring the analysis of biological material from exhumation; his death occurred in 1986. At the time of collection of the biological sample the forensic expert found that the tomb contained 8 skeletons which only one of them was identified with the name of the biological mother of the alleged father (BMAF); the others had no identification.

Objective: Identify which of these samples could belong to the AF, since the bone samples were collected from seven unidentified skeletons and one skeleton identified as being the BMAF.

Material and Methods: All DNA samples were extracted from skeletons using DNA IQ™ (Promega) and PrepFiler BTA Forensic DNA Extraction kit (Life Technologies) and first of all analyzed for the amelogenin marker including BMAF. The samples identified as females were discarded while the males and BMAF were analyzed by autosomal STRs, hypervariable regions mtDNA (HVI, HVII and HVIII), 38 autosomal INDELs and 10 X-STRs.

Results: Three samples were identified as female and were discarded from the possibility of being the AF and four of them showed no amplification for the marker; two samples were identified as male and the sample named as BMAF was also identified as female. The 2 male samples and the sample without sex identification were compared with BMAF sample by mtDNA hypervariable regions since autosomal STRs showed no amplification. In this comparison, one of the male samples presented the same mtDNA haplotype as BMAF, indicating that this sample could belong to the AF; the other samples showed different haplotypes. Finally, analysis of 38 autosomal INDELs and 10 X-STRs confirmed maternity exclusion (BMAF versus AF), despite having the same mtDNA haplotype.

Discussion and Conclusion: We detected paternity exclusion between AF bone sample and the blood sample of the questioned daughter. This case generating a total of nine reports to the court trying to explaining better the analysis as we will present in the meeting.

Acknowledgment: FAPESP (2013/12282-0) for partial support for RMBC.