



### **F51 Two Cases With Closed Suspect Populations and High-Quality Bitemark Evidence**

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After attending this presentation, attendees will understand how high-quality bitemark evidence can be used in the legal system to assist investigators, prosecutors, defenders, and triers of fact with cases that include patterned injuries suspected to be bitemarks. Two cases that involved violent abusive attacks to a young child and featuring physical evidence sufficient to permit both bitemark analysis and bitemark comparisons are presented. Considering that the two cases had similar backgrounds and evidence, similar results may seem likely; the actual outcomes may prove surprising.

This presentation will impact the forensic community by detailing two cases with bitemark evidence appropriate for conducting bitemark analysis and bitemark comparison. These two cases illustrate the use of the American Board of Forensic Odontology (ABFO) Bitemark Analysis and Comparison Decision Tree to assist the forensic odontologists in making the appropriate analysis and comparison decisions. The backgrounds, processes, procedures, and conclusions for these cases demonstrate how appropriate evidence from high-quality human bitemark evidence in the skin of living humans can be valuable in the search for the truth regarding the identification, inclusion, or exclusion (with reasonable medical, dental, or scientific certainty) of those individuals who become suspects in a bitemark case.

Although bitemark evidence has become the most controversial aspect of forensic odontology and one of the most challenged forensic science practices, the appropriate analysis and comparison of high-quality bitemark evidence remains valuable for those seeking the truth. Historical reviews of past bitemark cases reported in the literature primarily involve cases corrupted by bias, incompetent analysis, or both. These cases, some of which resulted in the conviction of innocent persons, have been the most commonly *reported* cases and those reports have been used by some to support their beliefs that bitemark evidence should not be admissible in the legal system. Although some cases ended tragically for those actually innocent, very many more cases with bitemark evidence have been completed in which the scientific analysis of the bitemark evidence, as a part of the overall case evidence, has been a valuable part of the investigation and prosecution of those who inflict physical attacks and abuses on innocent victims.

This presentation provides actual case studies involving two victims of physical abuse with bitemarks. Following ABFO Bitemark Standards and Guidelines and using ABFO Bitemark Terminology and the ABFO Bitemark Analysis and Comparison Decision Tree, these two cases demonstrate the value of bitemark evidence.

**Case 1:** A three-year-old child was the subject of a violent abusive attack at home. Among other injuries were two patterned injuries judged to be human bitemarks. Sworn statements were taken from the two caregivers. Both confessed to being present when the attack occurred but denied being responsible for the attack. Photographic and trace swabbing evidence was collected from both bitemarks. Statements from the abused child were recorded. One of the two bitemarks was judged to be of high quality and evidentiary value and the other of good quality for analysis and comparison; seemingly, an ideal bitemark case scenario, but...

**Case 2:** A mother reported leaving her twenty-eight-month-old child at a friend's home. The friend later called the mother to report that her child was breaking out with a strange rash in multiple locations. Hospital personnel notified the police and child protective services that the child was a possible victim of abuse with multiple bitemarks. Later, an odontological evaluation confirmed multiple human bitemarks with varying evidentiary quality. One injury pattern was judged to be a human bitemark with high evidentiary value. Law enforcement and protective services investigators developed a population of possible abusers that included the mother, the friend, the friend's four-year-old child, and the friend's live-in boyfriend. The boyfriend became the prime suspect and was taken into custody. The subsequent bitemark analysis and bitemark comparisons became key elements of this case.

Proper forensic odontological evaluation of bitemarks with high evidentiary value can assist investigators in identifying, including, or excluding biters, with reasonable medical, dental, or scientific certainty in cases of abuse with bitemarks. Forensic Odontologists can provide testimony that will assist triers of fact to understand bitemark evidence. If all aspects of cases are managed appropriately by forensic experts, law enforcement investigators, prosecutors, defense attorneys, juries, and judges, guilty suspects should be appropriately dealt with and innocent suspects protected and absolved.

#### **Bitemark Evidence, Bitemark Analysis, Bitemark Comparison**