



F26 Bite Marks on a Live Victim: Data Collection, Healing Process, and Loss of Details

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After attending this presentation, attendees will have a better understanding of the influence of many factors involved in bite mark recording, the healing process, and the loss of detail when the injury is inflicted on a live victim.

The presentation will impact the forensic science community by enabling the forensic scientist to observe how, with known medical history in the absence of victim/perpetrator movement and clothing, and the natural healing process, effects bite mark data collection and analysis.

It is known that bite mark data collection and analysis is subject to variables that complicate the task. Such factors as skin color, Langer's lines, location of the injury, underlying tissue, presence of clothing, victim and/or perpetrator movement in addition to the healing process and the medical history of the live bite mark recipient.

The first part of the presentation will expose some of the factors that are usually unknown to the forensic dentist. The objective: to minimize the unknowns such as the amount of pressure applied to produce the pattern injury, the position of the biter and the victim, how specific is the biter's dentition, what are the possible appearance of the pattern injury created by one perpetrator at different locations, with an unanimated victim of known medical history, to prove that even with less unknown factors, bite mark data collection and analysis is a very subjective, delicate and difficult task.

A volunteer was bitten on four locations on the left side without any movement except for the movement of a Vice-Grip mounted dentition. Complete photographic documentation including general overview, close-up with and without the ABFO no 2 scale, color, IR, UV, ALI was performed for each injury on the day of infliction and for three consecutive days post-infliction, to evaluate the healing process of multiple bite marks on a live victim with optimal data collection conditions (immediately post infliction) and a close follow-up.

In the second part of the presentation the ABFO recommended photographic documentation is analyzed (color, IR, UV, ALI) in reference to the healing process. Also comparisons done between various stages of healing and various dentitions is closely examined to try to determine when the amount of information loss is such that perpetrator identification by dental means is not possible.

In summary, this presentation will inform the attendees about the added difficulties of bite mark data collection and analysis when dealing with a live victim. It will also provide the scientific community with the effects of healing on photographic documentation and help in the understanding of important influences of the usual unknowns (force applied, exact timing of the injury) when confronted with pattern injury analysis.

This information is expected to aid forensic dentists to take all the necessary precautions to avoid loss of valuable information and to remain cautious before rendering an opinion in bite mark cases on a live victim.

Bite Mark, Healing, Live Victim