



F48 U.S. Tooth Mark (Bitemark) Problems as Seen From Abroad

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After attending this presentation, attendees will acquire a more nuanced view on tooth mark examination, comparison, evaluation, and conclusion. Attendees may also acquire a better understanding of the scientific problems behind the assessment of a tooth mark case and a better understanding of the inquisitory system of experts in European courts.

This presentation will impact the forensic science community by providing a better understanding of tooth mark examination, comparison, evaluation, and conclusion. It may also improve the scientific research behind these analyses. Also, for the U.S. forensic odontologists, it will give a better understanding of the inquisitory system of experts.

For years, a debate has been going on in the American Academy of Forensic Sciences (AAFS) about bitemarks or tooth marks as some prefer to call it. The discussion is about the science of the examination of the tooth marks and if they should or should not be admissible as evidence in the court of law. This presentation will encourage discussion of some of the problems as seen from a European country (Norway) will be discussed.

One problem is that many American forensic odontologists seem to believe that it is their responsibility to tell if the person did in fact bite or not, which could impact whether they win or lose the case. It is therefore tempting to go too far.

Examination of tooth marks can be done in different ways. However, the important point is how many details we can see in the mark and if we find these details again in the teeth of the suspect. If we can, we must consider how likely it is that another person may see these details. That is the science and our area of expertise as we have an idea of how frequently the combination of details will occur. This is what the courts should be told.

It may not be so well known to U.S. forensic odontologists that the role of the expert witnesses is different in most European countries compared to Anglo-Saxon countries. The difference in roles between the adversary system in Anglo-Saxon countries and the inquisitory system in European countries will be discussed and also the possible influence that may have on the expert's testimony. In the inquisitory system, the role of the expert is to inform the court about the scientific value of the particular evidence and, in addition, about his own opinion regarding the case based on all facts. One can never be 100% sure that a particular person was the biter. An absolute conclusion may be binding for the court. In the European system it is left to the court to make the final decision based on a total evaluation of the evidence.

Admissibility is a specific Anglo-Saxon problem. In the inquisitory system, all evidence that the parties claim or the court asks for can be shown in the courtroom. It is up to the judge to decide how to weigh the evidence. A problem with not allowing tooth marks as evidence is that this could free a suspect. The so-called Innocence Project runs the risk of throwing out the baby with the washing water. Innocent suspects lose the possibility of proving they are right. The effect could be that innocent people may be sentenced.

Research in tooth marks has to some extent taken the wrong direction. Each tooth mark is different, and thus cannot be examined like a factory product or chemical test. Some marks have a lot of detail and may have a high evidentiary value. Other marks have few details and lower evidentiary value. The rate of failure is requested and can never be given as it will vary from case to case and from examiner to examiner. Thus to assess this, each mark and examiner should be exposed to a full scientific examination, which is, of course, impossible.

Quality assurance is important and a safeguard against wrong convictions. The International Organization of Forensic Odonto-Stomatolgy (IOFOS) has for many years advocated that two experts must agree on the conclusion and both sign the reports. Recently, the American Board of Forensic Odontology (ABFO) has also adopted this recommendation in tooth mark analysis.

Tooth Marks, Adversary System of Experts, Inquisitory System of Experts