

1)

2009 Bush et al. *Biomechanical Factors in Human Dermal Bitemarks in a Cadaver Model*. J Forensic Sci, January 2009, Vol. 54, No. 1.

First serious consideration of skin properties. 23 bites were made in cadaver skin, none were measurably the same. Postural distortion was significant. Bitemarks were not reproducible.

2)

2009 Miller et al. *Uniqueness of the Dentition as Impressed in Human Skin: A Cadaver Model*. J Forensic Sci, July 2009, Vol 54, No 4, 909-14.

100 models were compared to bitemarks made with selected aligned dentitions. Multiple matches were found in non-biting dentitions. In many instances, a dentition other than the biter was a better "fit" to the bitemark. Suggests significant possibility of false positives and false negatives.

3)

2010 Bush et al. *The Response of Skin to Applied Stress: Investigation of Bitemark Distortion in a Cadaver Model*. J Forensic Sci, January 2010, Vol. 55, No. 1.

Force per unit area was varied during controlled bites. Bite appearance was not predictable, nor did laceration reliably occur. A more important variable is tissue type.

4)

2010 Bush MA, Cooper HI, Dorion RBJ. *Bitemark Profiling and Arbitrary Distortion Compensation Examined: Inquiry into Scientific Basis*. J Forensic Sci 2010; 55(4):976-83.

Discussion with examples of why it is not appropriate to profile a biter or universally make distortion corrections in a bitemark on human skin.

5)

2011 Bush et al. *Statistical Evidence for the Similarity of the Human Dentition*. J Forensic Sci in press July 2011, currently online.

Refutation of Rawson's 1984 study claiming dental uniqueness. Statistics were used that took into account correlation and the non-independent nature of the human dentition. Matches were found in the populations studied.

6)

2011 Sheets et al. *Dental shape match rates in selected and orthodontically treated populations in New York State: A 2 dimensional study*. J Forensic Sci, in press.

Large population study establishing dental match rates of the anterior dentition. Orthodontic treatment had a dramatic effect, with a match rate of 42% in 110 dentitions.

7)

2011 Bush et al. *Similarity and Match Rates of the Human Dentition In 3 Dimensions: Relevance to Bitemark Analysis*. Available online early, International Journal of Legal Medicine.

Match rates determined in large population using 3D models and shape analysis.