

exposure. A better postmortem radiograph leads to a better antemortem/postmortem comparison.

Also, with minor variations, this positioning device can be set on a jig and used to suspend simultaneously both excised upper and or lower jaws in their proper planar orientations for orthopantograph imaging. Lastly, this device can be formed into a "skull cradle" and placed on the same jig for imaging of a complete skull with its associated maxilla and mandible. This positioning device with its articulating segments can replicate the upper portions of the spine for very good orthopantograph positioning, i.e., the Frankfort plane, which could be helpful in identifications as well as research endeavors of the skull.

Positioning Device, Hands Free, Odontology

F18 Identification of David Koresh by Dental Records

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After attending this presentation, attendees will have an understanding of the process of identification of unidentified human remains by dental records as applied to the Mount Carmel incident near Waco, Texas, in 1993.

This presentation will impact the forensic science community by providing a review of one forensic science discipline's contribution to the resolution of a significant mass-fatality incident.

Eighty-six people died as a result of the Mount Carmel incident: ten people in the initial raid on the compound on February 28, 1993 (six residents of the compound and four BATF agents), and 76 people died in the fire that subsequently occurred at the compound on April 19, 1993.

The Texas Justice of the Peace with jurisdiction in this matter ordered the decedents to be taken to the morgue at the Tarrant County Medical Examiner's District (TCMED) in Fort Worth, Texas, for autopsy and examination under the direction of Chief Medical Examiner. The Director of the TCMED Human Identification Lab at the time was Rodney Crow, DDS. The "Dental Disaster Squad," composed of many members of the Fort Worth District Dental Society had been well prepared for such a mass-fatality incident by: (1) training at the Southwest Symposium on Forensic Dentistry at the University of Texas Health Science Center at San Antonio Dental School; and, (2) participation in actual, local incidents involving Delta Airline flights 191 (1983) and 1141 (1985) at D/FW International Airport in Fort Worth/Dallas, Texas. Approximately 40 to 50 unpaid volunteers from the dental society donated almost countless hours of professional services extending over a period of three months.

Dental ID, Mount Carmel, David Koresh

F19 Development of a Colorimetric Scale as a Visual Aid for the Time of Bruising in Blunt Trauma and Bitemark

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After attending this presentation, attendees will learn more about color of bruise versus age of bruise and how a colorimetric scale may be visual aid for the assessment of the age of bruising.

This presentation will impact the forensic science community by introducing two prototype colorimetric scales with and without linear

measurement, each with six bruising colors, three circles with black and white calibrators to be used for forensic photography of white European population

Medical examiners and forensic odontologists are frequently asked to establish the age of a bruise on a living or deceased individual. Injuries may be the result of bitemarks or of non-accidental traumas, thus having a medico-legal significance in the field of child abuse. In June of 1996, persons investigating child abuse and neglect were mailed a pamphlet from the U.S. Department of Justice entitled, "Recognizing When a Child's Injury or Illness is Caused by Abuse," with a specific part dedicated to aging of bruises. The pamphlet gave a very clear cut description of color of bruise versus age of bruise, as follows: Red 0-2 days; Blue, Purple 2-5 days; Green 5-7 days; Yellow 7-10 days; Brown 10-14 days. However, a colorimetric scale for forensic photography based on the bruise colors has never been proposed, as photographic color reproduction is unreliable and depends on several factors, like camera, lighting, printer, and photo-editing color calibration.

The purpose of this study is to propose two prototype colorimetric scales with and without linear measurement, each with six bruising colors based on RGB color model, three circles with black and white calibrators to be used for forensic photography of skin injuries of white European population, during different stages of healing. The prototype scales were employed during forensic photographic imaging of cases of blunt trauma and bitemarks.

This study does not attempt to give a definitive account of the different scientific methods available for the assessment of the age of bruising. This presentation will present an opinion that a color aid when analyzing photos could assist with the interpretation and accuracy of estimation of bruise age, especially when the analysis it made directly on digital images prior to printing. Such an aid would give a reliable standard condition and allow color calibration. It is essential that the colors within the image represent colors within the bruise under standard and reliable conditions.

Observation on a large sample of blunt trauma and bitemark injuries applying the proposed colorimetric scales is needed to verify and validate the preliminary results obtained, although bruise age estimation remains an expert opinion with several degrees of accuracy and variability. For this reason colors within the bruise have to be analyzed by experienced and confident observers along with every and any relevant findings and observations in order to prevent errors or misjudgment.

A synergy between medical examiners and odontologists is also advisable for a more acceptable forensic interpretation in order to assess the correction parameters to be used in the proposed colorimetric scale.

Bruise Age Estimation, Forensic Odontology, Bitemark Analysis

F20 Forensic Identification of Flight AF 447 Disaster Victims

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After attending this presentation, attendees will learn more about DVI in a multinational scenario applying INTERPOL recommendations.

This presentation will impact the forensic science community by demonstrating how every identification method should be employed when human identification is requested.

Air France flight 447 departed on schedule at 19:30 (22:30 GMT) on May 31, 2009 from Rio de Janeiro for Paris. On board were 228