F44 ID – The Unknown – A Piece to the Puzzle

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After attending this presentation, attendees will understand how that the field of dental implantology can provide the dental forensics division an invaluable tool in the identification process of the unknown and missing.

This presentation will impact the forensic science community by pointing out the grossly overlooked possibility for a new identification tool in the field of dental forensics.

The design and production of dental implants began 34 years ago with Leon Shaw, one of the first prodcers of dental implants. Since this time, implants have undergone various transformations in relation to design, shape, architecture, and metallurgy or component consistency. Today, there are literally hundreds of different dieigns and components.

Dental implants were introduced in the U.S. in 1940 with Gustavo Dahl presenting the first dental implant – a subperiosteal design. Since its inception in 1940, the field has gone from subperiosteal to blade-type or endosteal implants invented by Dr. Leonard Linkow of New York City, mucosal inserts (Park Dental's Jack Wimmer). Endodental stabilizers, screw-type implants, mini implants, with each type promoting different restorative options in the field of dental implantology. All of these, when located in the unknown, can provide a useful tool for the forensic dentist to utilize as a possible piece of the puzzle in the identification process.

Serving on the IAPC (International Organization of Police Chiefs) Forensic Committee and the committee to ID the missing, one simple goal presented itself– the placement of ID numbers on all dental implants. This may sound simple; however, for six years after contacting congressional members to no avail (Markey, Boston; Schultz, Broward County, Florida), progress has not been made. Unfortunately, there is now 69 years of dental implants being placed in this country without any IDs located on them. The cost factor, with today's technology, would be insignificant, amounting to less than 50 cents per implant. The ID numbers are not visible to the naked eye and can only be read with a special reader, which many companies already have, and would not influence the success or failure of the implant, but would provide an invaluable tool in the ID process.

This past year approximately 600 million dollars were spent on dental implants in the U.S. The significance of this figure speaks volumes as to this piece to the puzzle. However, all is not lost. At this time dental implants without IDs to help ID unknowns can still be utilized.

Recently a mandible (lower jaw) was found on a beach in California. After x-rays were taken, it was found to have a dental implant and a referral was made for identification of the type and manufacturer of the implant. With the cooperation of several people in the industry, the identity the manufacturer, type, and approximate year it was produced were identified. This reduces the number of dentists in the U.S. who might be able to provide an ID in this case from 165,000 to 200 (only those customers on the list from the manufacturer); and reduces it even further down to the one customer who might have purchased this type of implant. If this implant had an ID number, this process would have been immediate.

At this time, the goal is to expand this process to all orthopedic implants inserted in a human body (hips, knees, shoulders, etc.) with hopefully someday a central bank – perhaps located in UCF under the direction of Carrie Whitcoff for the registration of all implants.

Resolutions from the IAPC and the committee to ID the missing have been granted regarding this matter, with both organizations giving their unconditional support to this ongoing process.

The goal is to provide any and all information regarding: (1) type; (2) manufacturer; (3) metallurgy; and, if possible, (4) year manufactured.

Implantology, Missing, IDs

