Journal of Forensic Sciences & Criminal Investigation

Juniper Publishers key to the Researchers

Letter to Editor
Special Issue - March 2017
DOI: 10.19080/JFSCI.2017.02.555596

J Forensic Sci & Criminal Inves

Dental Implant Registry and for Disaster Victim Identification

***PJW Verco**

North Adelaide Medical Centre, Australia

Submission: February 20, 2014; **Published:** March 28, 2017

***Corresponding author:** PJW Verco, North Adelaide Medical Centre, 183 Tynte Street, North Adelaide SA, 5006, Australia, Tel: +61 8 8267 4081; Fax: +61 8 8267 4976; Email: joeverco@verco.com.au

Abbreviations: DVI: Disaster Victim Identification; MOM: Metal to Metal; ASR: articular surface replacement; TGA: Therapeutic and Goods Administration; NJRR: National Joint Replacement Registry; AOA: Australian Orthopaedic Association; GHTF: Global Harmonisation Taskforce; AHWP: Asian Harmonisation Working Party; ISO: International Standards Organisation; FDA: Food and Drug Administration; MHRA: Medicines and Health care products Regulatory Authority

Letter to Editor

Disaster Victim Identification (DVI) is an internationally accepted method used to identify victims of mass casualty incidents such as aircraft crashes, bomb blasts, earthquakes, tsunamis, fire and floods, etc. The process can be lengthy and involved due to the nature and complexity of the event. The need to correctly identify the victim(s) is critical. The risk of misidentification of an individual can bring into question all identification and heighten the trauma of what is an already stressful situation. In terms of currency, it is reasonable to say that foremost in the minds of the public remains concerns for the victims and their relatives and friends of the air disaster which involved MH17 and MH 370. Within the context of DVI there are a range of forensic science techniques used to make positive identification of deceased persons including fingerprints, odontology (mainly dental records), and DNA profiling. Dental records are considered to be the most reliable for identifying victims as teeth, including dental implants, and bones are highly durable and most individual have dental records. This paper proposes dental implants should be considered to be 'medical devices' by definition and to this end that they are permanently marked for identification purposes, analogous with other medical devices, and subsequently recorded in a mandated register. There are 805 different dental implants being marketed worldwide. The insertion of dental implants across the Western World is increasing significantly each year with countries such as South Korea and India. However, Switzerland is still the most prolific in this regard. Currently there are Australian Regulatory Guidelines for Medical Devices including hip and knee replacement joints, but dental implants are not considered medical devices as they are classified as "not fixtures". Hence, no regulation for Osseo-integrated dental implants. Dental implants are a metal to metal (MOM) implant, but do not have movement. This was a problem for articular surface replacement (ASR) hip joints which were removed in 2009. Johnson and Johnson ownde Puy have set aside some $10bn for compensatory claims. Despite the design being made by an orthopaedic surgeon in Sports med SA it appears that the metallurgy has let the process down. The Therapeutic and Goods Administration (TGA) acted upon the Australian National Joint Replacement Registry (NJRR) and worked with the Australian Orthopaedic Association (AOA) to recall the failed joints.

Internationally

The mainstay of processes has been developed by the Global Harmonisation Taskforce (GHTF) which includes Europe, USA, Japan, Canada and Australia. There is also the Asian Harmonisation Working Party (AHWP) for medical devices of which Australia is a member.

Standards

i. Internationally there is the International Standards Organisation (ISO)

ii. USA has the Food and Drug Administration (FDA)

iii. UK has the British Standards Institute. The assessment body under the British Regulator is the Medicines and Health care products Regulatory Authority (MHRA)

iv. Australia has the Therapeutics and Goods Administration (TGA)

Australian Initiative

Australia is well position to demonstrate leadership for dental implants to be classified as a medical device. This will be for the betterment of members of our society not only in

terms of professional accountability and quality control but will result in the formulation of an internationally recognised register which, inter alia, will enable dental implant to be readily tracked and identified. A key component of this initiative will focus on efficiency and effectiveness in terms of disaster victim identification particularly in instances when human remains have been subjected to intense heat and other forms of decomposition. There is a perceived need for the Government to have a responsible role in regulation through TGA. The scope for an International Standard for individual marking rather than batch number only would be beneficial. Today two Dutch persons from Aircraft MH17 are still to be identified. Should the fuselage of MH 370 ever be located it is logical to assume the only way in which the skeletal remains of the victims will have any likelihood of being identified will be through dental records. Medical devices compulsorily have to be permanently marked. Usually, manufacturers trade mark, CE alpha-numeric symbol for Europe, batch number, component number, date of manufacture. Laser marking is governed to ensure legibility and letter size. In Australia the Dental Implant Register, could form part of that already done by Australian Orthopaedic Association. I do hope that the Department of Foreign Affairs and Trade has the time to help make a difference for all. In saying this, it needs to be remembered that often the only available means of conclusively identifying victims of disasters, in whatever form they come, is by means of dental records, and this includes dental implants. This in turn may provide the only way in which relatives and friends of victims can achieve closure - emotionally and legally. Sir Angus Houston is the Keynote speaker at the 'Hawke Oration' in the Adelaide Town Hall on 14 Sept 2015 on the topic of MH370 and MH17, and it would be astonishing to see how quickly this concept might help in the future.

DOI: 10.19080/JFSCI.2017.02.555596

How to cite this article: PJW Verco. Dental Implant Registry and for Disaster Victim Identification. J Forensic Sci & Criminal Inves. 2017; 2(5): 555596. DOI: 10.19080/JFSCI.2017.02.555596.