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Nano-dentistry: Advanced endeavor to present and future for oral health

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Nanotechnology is a term that is gaining importance and expertise in every area of medicine. Nano is derived from the Greek word *Nuavoc* which means dwarf, by definition one nanometer (10⁻⁹) or one-billionth of a meter. It is engineering at the molecular scale. Nanotechnology has revolutionized the field of dentistry with tremendous potential to provide a comprehensive oral health care using the nano-materials, advanced clinical tools and devices. The budding nanotechnology has tremendous applications in health care leading to the evolution of nanomedicine (including nano-dentistry). Dental nano-robotics is the most awaited and challenging application in nano-dentistry. Nanotechnology has revolutionized the field of dentistry. Emergence of nano-dentistry will aid in the maintenance of perfect oral health care through the use of nano-materials, biotechnology and nano-robotics. Application of nano-dentistry can be categorized as the top-down approach and the bottom up approaches. The emergence of consensus concerning the direction, safety, desirability and funding of nanotechnology will depend upon how it is defined. Nanotechnology offers great potential in the field of dentistry ranging from dental restorative materials to implants to surgical procedures to bone replacement material etc. However, along with a lot of advantages, it also poses a lot of risk to the human beings. Thus the aim of nano-dentistry may be broadly defined as the comprehensive monitoring, control, construction, repair, defense and improvement of all human biological systems related to oral tissues, working from the molecular level using engineered devices and nanostructures, ultimately to achieve medical and dental benefit. Nanotechnology has a potential to transform the field of dentistry, because it offers novel opportunities for sensing clinically relevant markers, molecular disease imaging and tools for therapeutic intervention. The future holds in store an era of dentistry in which every procedure will be performed using equipment and devices based on nanotechnology. This purpose of this poster is to review current status of nanotechnology in dentistry and to provide an insight into what the present and future holds, highlighting the ethical and safety concerns associated with the use of nanotechnology.

Biography

Rajesh Kumar tries to take as much of a holistic approach to his patients as possible by focusing on health, wellness and prevention of disease and has special interest in providing condolence and emphasize to deliver constant patient education. He has attended many national and international conferences, conventions and continuing dental programs and presented various posters and given oral presentation at national and international level. He has also credit with best poster presentation in CDE at Sharda University, Greater Noida on 8th November 2016.

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