Nanotechnology and its vistas in dentistry

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Nanotechnology, a conglomeration of the multidisciplines, includes biology, physics, engineering and chemistry. This field opened up to create new vistas for advancements in medical science and is providing novel approaches for disease diagnosis and prevention and promoting human health care. The ideology behind nanotechnology is to employ individual atoms and molecules to construct functional structures. These structures are highly specific to target the cellular and sub cellular (molecular) mechanisms of the body designed to achieve maximal therapeutic efficacy with minimal side effects. Various nanosystems can be successfully used as new drug carriers (drug delivery systems), and these nano-scale objects can deliver the repaired genes or replace the incorrect genes (gene delivery).

Nanotechnology plays a vital role in the maintenance of comprehensive oral health by employing nanomaterials, including tissue engineering, and ultimately, dental nanorobots thus generating a part of predicted future.

Biography
Aparajita Sunkavalli, a dental practitioner and a Periodontist, has completed her postgraduation in Dentistry in 2011, from GITAM University, Visakhapatnam. She has published a handbook on “The role of cytokines in Periodontal Diagnosis (2012)”, an article, i.e., letter to the editor in Oral Oncology (2012), an article under revision in Oral Diseases.

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Primary infertility and human papilloma virus genotyping

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Human Papilloma Virus (HPV) infection is one of the commonest among the sexually active individuals and in some cases this infection could coincide with pregnancy in women and many times it causes infertility. In the present study, the examination of 315 women was carried out. Out of which, 98 cases were found to be of primary infertility. Among primary infertile cases, 80% of women, when tested with the aid of Papanicolaou stain smear test, were found to be negative while 20% positive cases were recorded. Further, the studies were carried out for detection and genotyping of HPV following standard Polymerase Chain Reaction (PCR) Protocol. The said investigation revealed that, out of 77 case studies carried out for HPV genotyping, high risk HPV genotype 16 is highly prevalent with primary infertility from Central Indian population as compared to other HPV genotype under study.

Biography
Prajakta Patil is a Research Student at the Rashtrasant Tukadoji Maharaj Nagpur University under the supervision of Arti Shanware.

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