

21. Epigenetics: An unexplored frontier of implant dentistry- a review

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Epigenetics is the study of heritable changes in gene function that do not involve changes in the dna sequence. Dental implant procedures have shown satisfactory clinical as well as biological outcomes as documented in the literature. In fact, rehabilitation with dental implants has become the treatment of choice in replacement of missing teeth. However, the genetic mechanisms controlling the peri implant biological processes remain largely unexplored. . This paper presents a review of the field of epigenetics especially as related to implant dentistry. It defines epigenetics, addresses the underlying concepts and provides details about various epigenetic molecular mechanisms as effecting implant dentistry. This paper will also review the available evidence regarding the potential effects of dna methylations, histone modifications or micro-rna production on osseointegration, peri-implant mucositis ,perimplantitis and finally on implant survival.

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