Stress analysis studies with dental implants, different situations and connections with natural teeth

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The dental implants represent a useful method in solving many problems in restoring edentulous or partially edentulous patients. Their integration to the jaw bone can be predicated to large extent; however marinating such integration depends on many biomechanical factors that should be considered. The implant position in relation to occlusal plane; the amount and direction of occlusal loads and connection to natural abutments are among these factors. In order to predict the clinical behavior of a specific implant configuration for treating certain partially edentulous or completely edentulous situations; several methods can be utilized in vitro. Strain gages and finite element analysis (FEA) methods are widely used for these purposes. The current presentation tries to cast light on some questions; linear or staggered arrangement of implants in completely edentulous situations. Is it safe to connect an implant to natural abutment with different bone support in over-denture design? What kind of attachment to use when using an implant for extensive mandibular partially edentulous situation as an abutment for implant supported removable partial denture? Finally, is it necessary to splint in the previous situations? The current presentation tries to address these issues with the results of several in vitro studies conducted by the author's research group using FEA and strain gages.

Biography
Emad Mohamed Tolba M Agamy has obtained his BDS, M Sc DS and DDS degrees from Cairo University, 1989-2005. He also obtained another PhD from Cologn University, 2004. He is working at Minia University, Egypt since 1998, where he is conducting and supervising multiple researches that resulted in more than 15 Msc and PhD thesis. He is the Head of Prosthetic Dentistry Dep. and Director of Minia University educational Dental Hospital. He has published more than 20 papers in reputed journals and conferences and serving as a peer reviewer in J Oral Implantology and holds a patency on new design for maxillary osteotomes.

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