Considerations for successful implant treatment in diabetic patients

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Aims: Literature review study aims to evaluate the effectiveness of glycaemic control, preoperative antibiotic and CHX mouth rinse and patient motivation on implant success in diabetic patients.

Discussion & Results: Hyperglycemia have been shown to alter normal process of osseointegration by inhibition of osteoblastic cell proliferation and collagen production, prolonged hyperglycemia may result in delayed wound healing around dental implant and osseointegration due to altered metabolic rate. While, the time required to achieve 100% level of healing, patients with high level of HbA1c ≥8.1% required about twice the time to return to baseline levels compared controlled and non-diabetic patients. Some articles show better success rates of dental implant treatment regardless diabetic control level by following a restricted protocol includes antibiotic course and CHX (0.12) mouthwash. Preoperative antibiotic usage showed a favorable improvement in implant survival (Table1), also the improved implant success by using CHX persists from implant insertion till prosthesis construction phase and extend post-loading (Table2).

Conclusions: Pre-operative antibiotic regimens and CHX mouth rinse must be kept in consideration to enhance wound healing and reduce possibility of infection. Always consider delayed loading, patient motivation and restriction to good glycemic control must be noticed and recorded in patient's file through follow up visits careless patients that show insufficient oral health care and lack of motivation. In such cases, dental implants don't consider as a treatment of choice.

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