

Guest Editorial

Understanding Periodontal Medicine Science – A Boon For Implant Science

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Periodontal Medicine is an integral part of treatment planning in clinical periodontics and oral implantology, in terms of correct diagnosis¹ and treatment planning. I congratulate and wish the best for the worthy team of 'Journal of Periodontal Medicine & Clinical Practice' to start a journal with strategic importance to this field of periodontal medicine.

Dental clinicians are dealing with an escalating number of medically compromised patients who require dental implant surgery for their oral rehabilitation. Before any form of endosseous implant therapy is considered in any patient, the medical history must be thoroughly reviewed and, if feasible, a physical examination performed. An existing systemic disease may complicate or contra-indicate implant placement. An increased awareness of the underlying disease process has improved the management of patients suffering from bone metabolism abnormalities, hypertension, thyroid disorders, diabetes mellitus, xerostomia, and ectodermal dysplasias. In some researches, diabetes, osteoporosis, steroid therapy, chemotherapy, and head and neck irradiation have been regarded as contraindications for dental implant placement.^[1,2]

However, other studies have shown that individual medical problems do not correlate with increased implant failure. It is suggested that implant success is influenced rather by bone quantity & quality and, by surgical technique.^[3] It would be helpful to categorize a minimal set of patient and disease related factors that increase the risk of implant failure. With this information, a clinician would be able to take additional precautionary measures where indicated, such as placing an extra implant, using longer healing time periods, using pre-

implantation hyperbaric oxygen in irradiated patients. Diabetes has been mentioned as a relative contraindication to implant placement and has been associated with life-threatening complications. Microvascular disease of the gingiva in diabetic patients



may adversely affect blood supply and contribute to delayed oral wound healing and susceptibility to infection.^[4] Radiation therapy has many adverse effects, the most relevant to bony and soft tissue healing being hypocellularity, hypovascularity, and hypoxemia. These changes in irradiated tissues may lead to an increased failure rate during the osteophyllic or osteoconductive phases of osseointegration.^[5] A protocol has been described to maximize implant success and long-term survival in patients who have undergone head and neck radiation. It involves a delay in implant placement surgery until 6 months after radiation, thorough informed consent, smoking cessation, preoperative hyperbaric oxygen therapy, increasing osseointegration time by 3 months before uncovering and loading and a strict oral hygiene regimen.^[6] In patients with significant osteoporosis, it may be tough to achieve immediate implant stability because of reduced trabecular bone mass. These category of patients may benefit from screw-type implants with large surface areas to maximize stability and facilitate osseointegration.^[2] More long-term researches of dental implant success and failure in relation to areas of periodontal medicine are necessary to maximize the information available to patients so they can

make accurate decisions regarding risks and benefits of dental implant treatment.

References:

1. Oikarinen K Raustia AM, Hartikainen M. General and local contraindications for endosseal implants-an epidemiological panoramic radiographic study in 65 year old subjects. *Community Dentistry Oral Epidemiology* 1995;23:114–118.
2. Blanchaert R. Implants in the medically challenged patient. *Dent Clin North Am* 1998;42 (1):35–45.
3. Smith RA, Berger R, Dodson T. Risk factors associated

with dental implants in healthy and medically compromised patients. *Int J Oral Maxillofac Implants* 1992;7:367–372.

4. Shernoff AF, Colwell JA, Bingham SF. Implants for type II diabetic patients: Interim report. *Implant Dent* 1994;3:183–185.
5. Marx RE, Morales MJ. The use of implants in the reconstruction of oral cancer patients. *Dent Clin North Am* 1998;42:177–202.
6. Larsen PE. Placement of dental implants in the irradiated mandible: A protocol involving adjunctive hyperbaric oxygen. *J Oral Maxillofac Surg* 1997;55:967–971.



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