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Selecting a Right Candidate for Dental Implants: Patient Related Risk Factors

Dental implants are one of the most widely used dental treatment modality around the globe. Growth and competition of hard core implant manufacturers, distributors and clinicians is so rapid that there are many gray areas emerging in terms of professional negligence that may hamper our primary goal of patient care or safety. One such gray area is a selection of a right patient for implant treatment considering all his/her risk factors. The clinicians must be aware of these risk factors and should be completely understands that 'It's not just about putting Titanium Screw in mouth!' What causes implants to fail in some patients but not others? The answer is still frequently been explained by the clinicians as a multifactorial and not in specific. The guidelines for patient risk assessment prior to placing the implants are still not well developed and are open for interpretation. There are many risk factors which the clinician is required to know and understand to advise patients, and consider in planning and treatment provision.



Liddelow and Klineberg¹ reviewed forty three studies and concluded that the consistent evidence exists to show an increased failure rate with smokers, a history of radiotherapy and local bone quality and quantity. Weaker evidence exists to show a higher incidence of peri-implant disease in patients with a history of periodontitis-related tooth loss. Osteoporotic patients show acceptable survival rates. Emerging evidence suggests that there is a correlation between genetic traits and disruption of osseointegration as well. Moy et al² retrospectively studied consecutively treated patients from January 1982 until January 2003 and concluded that patients who were over age of 60, smoked, had a history of diabetes or head and neck radiation, or were postmenopausal and on hormone replacement therapy experienced significantly increased implant failure compared with healthy patients. Chuang et al³ studied implant failures and their risk factors in 677 patients who had 2349 and concluded that the tobacco use, implant length, implant staging, and immediate implants were associated with the implant failure. Following are few patient related risk factors the clinician must be vigilant to consider them in treatment planning and prognosis. The same must be included in patient's written informed consent before execution of the treatment.

1. History of periodontitis-related tooth loss
2. Local bone quality and quantity
3. Smoking and tobacco use
4. Bruxism, clenching and grinding teeth.
5. Improper Occlusion
6. Chronic health conditions like autoimmune disorders, diabetes, or osteoporosis
7. Certain medications like bisphosphonates (used to treat osteoporosis), antidepressants
8. Existing infections adjacent to the implant site
9. Poor oral hygiene and maintenance
10. Head and neck radiation
11. Genetic traits and immunity

After listening to the patient's concerns and discussing the treatment objectives, the clinician must routinely following the sequential tasks of performing a clinical examination, defining the objectives, identifying risk factors, and assessing treatment difficulty before establishing a treatment.

References:

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Pravin Kumar G Patil

Managing Editor

International Journal of Prosthodontics and Restorative Dentistry

School of Dentistry, International Medical University

Kuala Lumpur, Malaysia

e-mail: pravinandsmita@yahoo.co.in

