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Immediate Implant Loading in Osteoporotic Patients: Mini Review

Mohammed Abu Younis and Ra'ed Abu Hantash*

Associate Professor, Al Quds University, Palestine

***Corresponding author:** Ra'ed Abu Hantash, Associate Professor, Assistant Dean, Al Quds University, Palestine, Email: rhantash@staff.alquds.edu

Mini Review

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Introduction

Immediate Loading in implant treatment has gained trust and confidence among implantologists. Hence, immediate loading needs careful criteria to be considered during treatment planning. Adell, et al. [1] advocated that implant micro movement caused by functional force around the bone-implant interface during healing may lead to fibrous tissue formation rather than bone [1]. Occlusal scheme is another key factor that predicts the success rate in immediate loading. Balshi & Wolfinger [2] claimed that most of failures in their immediate loaded implant patients were due to bruxism [2]. Surgical technique is another factor. Gentle surgery, absence of heat generation and operator experience play a marvellous role in raising the success rate. It has been elucidated that a temperature over 47 °C for a minute might yield heat necrosis in the bone [3,4]. Success rate effect ranged between negative factor to positive one in relation to the placement of immediate loading in fresh extraction sites and healed ones. Chaushu, et al. [5] claimed a negative effect if implants were loaded immediately in fresh extractions sites [5]. Whereas, Jo, et al. [6] claimed a higher success rate when implants loaded immediately in fresh extraction sites [6]. Operators' skills play a significant factor in enhancing implant treatment success. Clinicians who placed more than 50 implants will reduce the failure rate by 50% when compared with inexperienced ones [7]. Implant design plays a relevant role for yielding primary stability [8]. MalÓ, et al. [9] found no difference in success rate after 1 year between implants inserted with insertion torque ≥ 30 Ncm compared to implants inserted with torque < 30 Ncm [9]. Immediate implant loading for completely mandibular edentulous arches gained favorable clinical achievements in the long term [10]. Khan, et al. [11] claimed that platelet rich fibrin has a role in preventing bone loss during the surgical to prosthetic phase [11].

Bone diseases affect on implant osseointegration. Osteoporosis is an example; it is characterized by a decrease in bone mass, and considered a major public health concern [12]. Many authors [13-15] have advocated that mutilation of osseointegration might occur around implants in osteoporotic animal specimens. Degidi & Pittelli [16] advocated that it is possible to immediately load dental implants in an osteoporotic patient [16]. Osteoporosis is not a contraindication for implant therapy [17]. Oteoporotic patients received dental show acceptable outcomes [18].

References

1. Adell R, Lekholm U, Rockler B, Brånemark PI (1981) A 15-Year Study Of Osseointegrated Implants In The Treatment Of The Edentuolous Jaw. International Journal of Oral Surgery 10(6): 387-416.

2. Balshi TJ, Wolfinger GJ (1997) Immediate loading of Brånemark implants in edentulous mandible: a preliminary report. Implant Dent 6(2): 83-88.

3. Eriksson A, Albrektsson T, Grane B, McQueen D (1982) Thermal injury to bone. Avital microscopic description of heat effects. Int J Oral Surg 11(2): 115-121.

4. Eriksson RA, Albrektsson T (1984) The effects of heat on bone regeneration: an experimental study in the rabbit using the bone growth chamber. J Oral Maxillofac Surg 42(11): 705-711.

5. Chaushu G, Chaushu S, Tzohar A, Dayan D (2001) Immediate loading of single-tooth implants: immediate versus non-immediate implantation. A clinical report. Int J Oral Maxillofac Implants 16(2): 267-272.

6. Jo HY, Hobo PK, Hobo S (2001) Freestanding and multiunit immediate loading of the expandable implant: an up-to- 40 mouth prospective survival study. J Prosthet Dent 85(2): 148-155.

7. Lambert PM, Morris HF, Ochi S (1997) Positive effect of surgical experience with implants on second stage implant survival. J Oral Maxillofac Surg 55: 12-18.

8. Karl M, Irastorza- Landa A (2017) Does implant affect primary stability in extraction sites. Quintessence Int 48(3): 219-224.

9. MalÓ P, Lopes A, de Araujo Nobre M, Ferro A (2018) Immediate function dental implants inserted with less than 30 N.cm of torque in full arch maxillary rehabilitatetions using the ALL- on 4 concept: retrospective study. Int J Oral Maxillofacial surg.

10. Kaneda K, Kondo Y, Masaki C, Mukaibo T, Tsuka S, et al. (2018) Ten year survival of immediate loading implants in fully edentulous mandible in the Japanese population: a multilevel analysis. J Prosthdont Res.

11. Khan ZA, Jhingran R, Bains VK, Madan R, Srivastva R, et al. (2018) Evaluation of peri-implant tissues around nanopore surface implants with or without platelet rich fibrin: a clinico-radiographic study. Biomed Mate 13 (2): 025002.

12. Riggs BL, Melton LJ (1986) Involutional Osteoporosis. N Eng J Med 314(26): 1676-1686.

13. Lugero GG, de Falco Caparbo V, Guzzo ML, Koning B Jr, Jorgetti V (2000) Histomorphometric evaluation of titanium implants in osteoporotic rabbits. Implant Dent 9(4): 303-309.

14. Yamazaki M, Tokugawa Y, Motohshi M, Ohno K, Michi K, et al. (1999) Bone reactions to titanium screw implants in overiectomized animals. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 87(4): 411-418.

15. Hara T, Hayashi K, Nakashima Y, Kanemaru T, Iwamoto Y (1999) The effect of hydroxyapatite coating on the bonding of bone to titanium implants in the femora of ovariectomised rats. J Bone Joint Surg Br 81(4): 705-709.

16. Degidi M, Piattelli A (2003) Immediately loaded bar-connected implants with an anodized surface inserted in the anterior mandible in a patient treated with diphosphnates for osteoporosis: a case report with a 12-month follow up. Clinic Implant Dent Relat Res 5(4): 269-272.

17. Wagner F, Schuder K, Hof M, Heuerer S, Seemann R, et al. (2017) Does osteoporosis influence the marginal peri-implant bone level in female patients? A cross-sectional study in a matched collective. Clin Implant Relat Res 19 (4): 616-623.

18. Liddeow G, Klineberg I (2011) Patient related risk factors for implant therapy. A critique of Pertinent Literature. Aust Dent J 56(4): 417-426.