ISSN 2689-8268 | Volume 4

American Journal of Surgery and Clinical Case Reports

Case Series Open Access

The Immediate Implantation, an Ordinary Procedure, or a Major Risk in our Practice

Vangjeli A[1*] and Elbasani E[2]

[1]Department of Surgery, OMF Surgeon Albanian University, Albania

[2]Department of Surgery, OMF Pathologist Albanian University, Albania

[*]**Corresponding author:**

Aldo Vangjeli,
Department of Surgery, OMF Surgeon
Albanian University, Albania,
E-mail: aldo.vangjeli@yahoo.it

Received: 25 Apr 2022
Accepted: 11 May 2022
Published: 17 May 2022
J Short Name: AJSCCR

Keywords:

Normal implant; Immediate implant; Immediate load; Primary stability; Surgical trauma; Oral surgery; Dental implant; Immediate implant; Immediate loading; Primary stability; Surgical trauma

Citation:

Vangjeli A. The Immediate Implantation, an Ordinary Procedure, or a Major Risk in our Practice. Ame J Surg Clin Case Rep. 2022; 4(14): 1-5

1. Abstract

The immediate implantation, goes for the placement of the implants immediately after an extraction or a major oral surgery. In this case we face a second challenge, which is to be considered as a primary one, at the best of it: the pros and cons of these decisions, which might lead to the success or the failure of the surgical interventions. We as doctors have to choose wisely between the options of one or more sessions, according to the specific conditions of the cases.

1.1. Purpose: Our aim is to argue pro one session immediate implantation; despite of the primary diseases such as bone destruction due to the presence of cystic masses or other formations. We include here even immediate loading of the implants, even though these are two different concepts. So the theoretical question but basically a practical one is: should we consider this approach of solution? Or the taken risk might jeopardize the success of the surgical intervention?

2. Material and Methodology

In this article, it we are based in the cases treated in our clinic. Through the cases chosen for this discussion, we aim to bring to the table the experience and the results from the clinical and the theoretic and practical point of view.

2.1. Presentation

The patients want perfection and a quick job. This is one of the challenges while deciding the protocole of the surgical and prosthetic procedure (even thought this last one is a temporary one). The esthetics, which nowadays goes along with the function rehabilitation, makes the decission taking, even more difficult.

In some cases, the patient isn`t ours, they are "doctor jumpers", in some other cases, they are not so regular about the check up, and the reason they come to the clinic is the pain and disturb, or by chance we discover the silent pathology in a radiography.

Our goal is to place immediate implants trying to preserve the tissues, contours and dimensions of the alveolar process [1]. In cases where we have extractions of one or more teeth, atraumatic extraction is essential when we want to place immediate implants [8].

We have found even extreme cases of bone loss (for example, removable dentures kept for more than 15 years), and the decidion of the patients wanting a drastic change of the lower third part of the OMF region, with problems of mastication, fetor ex oris, and the need of the adjustment of all the dental arch.

We refer to the cystic formations, with no further infections, but at the same time, developed in silence has caused bone destruction. As they are asympthomatic, might cause deformations of the face due to the expansion and dectrustion of the bone, necrosis and resorbion of the teeth included in the area. This leads to a maloclusion in worst of the scenarios. But it should be noted that even if the conditions are not favorable, an alternative approach may have some advantages [2].

Patients refer nevralgic pain and we need a careful anamnesis, 2D and 3D Ro diagnostic examination, so to be more precise during the surgical procedure of the immediate implantation [13, 15]. A preoperative CBCT may be too much useful [26].

We should take into consideration every anomaly of the dental arch to make sure that the chosen procedure is the best, and to avoid every later sympthomatic reference to our intervention [15].

The normal procedure considers a period of six months, but even after this period of time, we`re not sure of the bone formation, and we had to make an immediate implantation loading, and the

regenerations seems to take a longer time. Nowadays, enriched plasma is widely implemented, giving us greater success opportunities [21]. What`s more important, is to ensure long-term implant sustainability through successful bone regeneration and with as few complications and surgical stages as possible.

2.2. Clinical Cases

Patient K.M, 60, male, comes to our clinic after an edema of the 'Fossa Caninae dextra' region, previously treated by his doctor. Graphics and clinical appearance (Figure 1a, b) show not only 11 fracture but also chronic inflammation in the periapical area.

The patient refuses to stay without teeth.

As a possible option is partial mini-prosthetics after tooth extraction with or without immediate implant placement.

In our opinion, any manipulation without immediate placement of the implant would give atrophic resorption with aesthetic impact which would require not only a lot of time to fix but without discussion some interventions (figure 2c). Even the method or technique of removing the the tooth is very important in such cases 6, 10, 11.

We have decided for 'Immediate post-extractive implant with immediate load'.

After opening the mucosal-periosteal limb, tooth extraction and bone cleaning, damage to the cortical part of the alveolar process is evident (Figure 2d).

In our case the valid 'Sticky bone' was definitely used not only to replace the lost bone 24 (Figure 3e). It is also worth noting that the different models of implants affect the biomechanics of the environment where the immediate implant is placed [21]. In our cases the 'BioniQ Lasak Implant System' has been used.

The implant was placed, ensuring the primary stability, which is very important for the well-being of the work [20]. The suprastructure was placed directly and then the wound was closed for a maximum of 72 hours. The patient has been in a follow up procedure.

Figure 1: Chronic inflammation in the periapical area

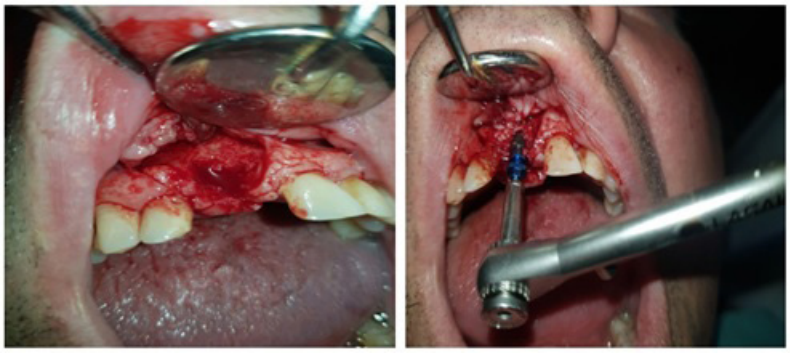

Figure 2: Removing of tooth

Figure 3: BioniQ Lasak Implant System

3. Case 2

Patient K.B 28 years old, female, come to our clinic with problems in the region [25, 26],

We diagnosed a fractured prosthetics, and so is even the 26, while the panoramic graph (figure 4) shows problems of a destructive nature in this region. The indisputable demand of the patient was the immediate placement of the teeth.

The intervention proposed by us was: 'Immediate placement of implants with immediate load' (figure 5).

After the opening of the mucosal-periosteal limb, the destruction of the alveolar process in the 26th region is distinguished, making it difficult not only for the immediate load but also for the placement of the implant.

However, implants were placed and the wound was closed 'per primum' (figure 6).

After 72 hours, the placement of the temporary teeth is completed (figure 7). The patient's condition is good. The case is being followed up.

Figure 4: Panoramic graph

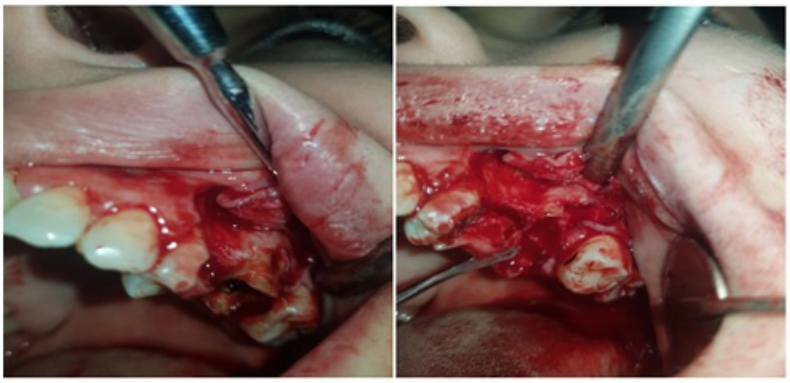

Figure 5: Placement of implants with immediate load'

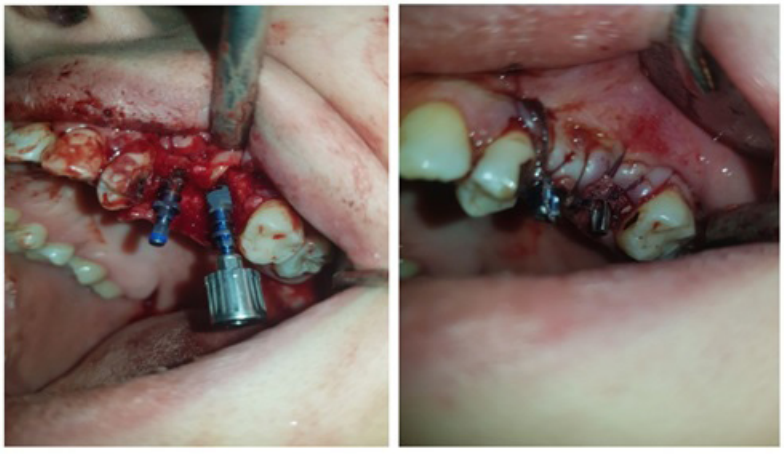

Figure 6: Wound was closed 'per primum

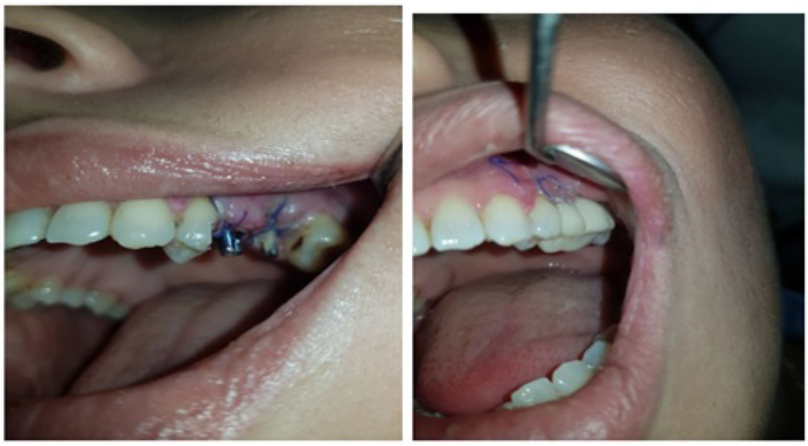

Figure 7: Placement of the temporary teeth

4. Discussion

The cases of cystic pathology in the oral region in patients who need implant surgery are a panorama of the same operating field so it is very difficult to separate them. However, the standards of intervention in each of them remain unchanged. The particular is in the placement of the implant or implants in the first stage where very good primary fixation and stability must be provided, as this stability can only be improved by placing the bone graft with or without the use of A.PRF, but in there is no way they can ensure this consistency.

Black and Kent emphasize that immediate implantation has many advantages over normal, because according to them, this method is less traumatic, the direction of implant placement is better, having the root axis, the loss of time is less, the pacement of the implant id deeper.

The authors Pecara, Asmau gives us data that the success of the immediate implant in five years is 94.1%, and there are even authors who think that the immediate implant is better than the normal implant.

Failure according to surgeon Gelb accounts for about 2-7% of cases with immediate implantation.

5. Results

The decision to continue the implantation process in cases of cystic pathology may also be actively decided during the surgical intervention, but it is advisable that this intervention be considered primary by the physician at the time of planning the intervention. Patient blood processing, differentiation of enriched elements regardless of their spin time and labeling is a very positive factor that gives us a high success rate, so its application as a standard procedure is one more reason to stick to the idea of a single intervention.

6. Conclusion

Immediate implantation presents some significant advantages but which rely absolutely on the professionalism of the physician. 15-25% loss in width and 2-4 mm in height of jaw bone, partially used tooth axis, reduces healing time but can also add to reduced patient cost.

References

1. Capelli M, Testori T, Galli F, Zuffetti F, Motroni A, Weinstein R, et al. Implant–Buccal Plate Distance as DiagnosticParameter: A Prospective Cohort Study on Implant Placement in Fresh Extraction Sockets. Journal of Periodontology. 2013; 84: 1768-74.
2. Chen ST, Wilson TG Jr, Hämmerle CH. Immediate or early placement of implants following tooth extraction: review of biologic basis, clinical procedures, and outcomes. Int J Oral Maxillofac Implants. 2004; 19 Suppl: 12–25.
3. Cosyn J, Sabzevar MM, De Bruyn H. Predictors of inter-proximal and midfacial recession following single implant treatment in the anterior maxilla: a multivariate analysis. J Clin Periodontol. 2012; 39: 895-903
4. Marconcini S, Barone A, Gelpi F, Briguglio F, Covani U. Immediate Implant Placement in Infected Sites: A Case Series Journal of Periodontology. 2013; 84: 196-202
5. Tarnow D, Chu SJ, Salama MA, Stappert CFJ, Salama H, Garber DA, et al. Flapless postextraction socket implant plaement in the esthetic zone: part 1. The effect of bone frafting and/or provisional restoration on the facial-palatal ridge dimensional change--A Retrospective cohort study. 2014; 34(3): 323-31.
6. Norton MR. The influence of insertion torque on the survival of immediately placed and restored single-tooth implants. Int J OralMaxillofac Implants. 2011; 26(6): 1333-43.
7. Juodzbalys G, Wang HL. Socket morphology-based treatment for implant esthetics: a pilot study. Int J Oral Maxillofac Implants. 2010; 25(5): 970-8.
8. Blus C, Szmukler-Moncler S. Atraumatic Tooth Extraction and Immediate Implant Placement with Piezosurgery: Evaluation of 40 sites after at least 1 year of loading. Int J Periodontics Restorative Dent. 2010; 30: 355-63.
9. Covani U, Cornelini R, Barone A. Buccal bone augmentation around implants with and without flap elevation: a modified approach. Int J Oral Maxillofac Implants. 2008; 23: 841-6.
10. Hämmerle CH, Chen ST, Wilson TG Jr. Consensus statements and recommended clinical procedures regarding the placement of implants in extraction sockets. Int J Oral Maxillofac Implants. 2004;

19 Suppl: 26-8.

11. Juodzbalys G, Sakavicius D, Wang HL. Classification of extraction sockets based upon soft and hard tissue components. J Periodontol. 2008; 79(3): 413-24.
12. Park JB. Immediate placement of dental implants into fresh extraction socket in the maxillary anterior region: a case report. J Oral Implantol. 2010; 36(2): 153-7.
13. Grunder U, Gracis S, Capelli M. Influence of the 3D bone-to-implant relationship on esthetics. Int J Periodontics Restorative Dent. 2005; 25(2): 113-9.
14. Kois JC. Predictable single-tooth peri-implant esthetics. five diagnostic keys. Compend Contin Educ Dent. 2004; 25(11): 895-6, 898, 900.
15. Choquet V, Hermans M, Adriaenssens P, Daelemans P, Tarnow DP, Malevez C. Clinical and radiographic evaluation of the papilla level adjacent to single-tooth dental implants. A retrospective study in the maxillary anterior region. J Periodontol. 2001; 72(10): 1364-71.
16. Caneva M1, Salata LA, de Souza SS, Baffone G, Lang NP, Botticelli D. Influence of implant positioning in extraction sockets on osseointegration: histomorphometric analyses in dogs. Clin Oral Implants Res. 2010; 21(1): 43-9.
17. Chuan-Yi Su, Fu J, Wang HL. The Role Of Implant Position On Its Long Term Success Clinical Advances in Periodontics. 2013; 1-4.
18. Vela X, Méndez V, Rodríguez X, Segalà, M, Tarnow, D. Crestal bone changes on platform-switched implants and adjacent teeth when the tooth-implant distance is less than 1.5 mm. Int J Periodontics Restorative Dent. 2012; 32: 149-55.
19. Rodriguez X, Vela X, Segalà M, Clavo J, Cambra J, Méndez V, et al. The effect of interimplant distance on the height of the interimplant bone crest when using platform-switched implants. Int J Periodontics Restorative Dent. 2009; 29: 141-51.
20. Schwartz D, Chaushu. The ways and wherefores of immediate placement of implants into fresh extraction sites: a literature review. J Periodontol. 1997; 68: 915-23.
21. Pessoa RS, Coelho PG, Muraru L, Marcantonio E Jr, Vaz LG, Vander Sloten J, Jaecques SV. Influence of implant design on the biomechanical environment of immediately placed implants: computed tomography-based nonlinear three-dimensional finite element analysis. Int J Oral Maxillofac Implants. 2011; 26(6): 1279-87.
22. O'Sullivan D, Sennerby L, Meredith N. Influence of implant taper on the primary and secondary stability of osseointegrated titanium implants. Clin Oral Implants Res. 2004; 15(4): 474-80.
23. Botticelli D, Berglundh T, Lindhe J. Hard-tissue alterations following immediate implant placement in extraction sites. J Clin Periodontol. 2004; 31: 820-8.
24. Schropp L, Wenzel A, Kostopoulos L, Karring T. Bone healing and soft tissue contour changes following single-tooth extraction: a clinical and radiographic 12-month prospective study. Int J Periodontics Restorative Dent. 2003; 23(4): 313-23.