

To Place or Not to Place Implants Immediately in Sites Bearing Peri-Apical Pathology Especially in Anterior Maxilla

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Received: February 04, 2021; **Published:** March 31, 2021

Immediate implant placement has become the new norm in clinical restorative dentistry in conditions demanding high esthetic outcomes especially in the anterior maxilla. Most times the reasons for extraction of maxillary anterior teeth are trauma, failed endodontic therapy, restorative failures or periodontal disease. Immediate implant placement in sites with peri-apical pathology seems to dissuade the practitioners from placing implants in these sites as they tend to fear the pre-existing pathology may preclude chances of osseointegration. Sarmast, *et al.* with a review of literature found that there is a 0.26% incidence of Retrograde Peri-implantitis in general and this number tends to come up to 7.8% if implants are placed in close proximity to teeth bearing endodontic lesions or with a history of endodontic treatment [1]. Quirynten, *et al.* reported 1.6% incidence of retrograde peri-implantitis in implants placed immediately in the anterior maxilla [2].

A systematic review by Chrcanovic, *et al.* suggests that it is relatively safe to place implants in sites having pre-existing periapical pathology, however they do not take into account anterior maxilla alone [3]. A recent report by Daubert, *et al.* shows presence of coronal bone loss in implants placed adjacent to teeth with endo-perio lesion after substantial amount of time post implant placement and loading which they have termed as endo-implant defects [4]. Nemcovsky, *et al.* contemplate delaying the implant placement in conditions involving bony defects especially limited to the buccal wall where they suggest to opt for an early placement rather than going for an immediate placement which according to them will provide better soft tissue response and healing potential [5].

Although the above evidences suggest the possibility of retrograde peri-implantitis in the apical and even the coronal bone around the implants placed immediately in extraction sockets or in sites adjacent to teeth treated endodontically the frequency of these situations remain very low. Denardi, *et al.* reported 100% survival of implants placed immediately in the anterior maxilla suggesting that the predictable way of making osseointegration predictable is to go for immediate placement of implants [6]. Novaes Jr, *et al.* suggest that while placing implants immediately in areas with periapical lesions, success can be achieved with preoperative and postoperative measures, such as antibiotic administration, meticulous cleaning, and alveolar debridement [7]. The cause of peri-apical pathology is housed in the tooth as bacteria makes its way into the intricate apical anatomy of the tooth. With extraction of the impeding tooth these favorable niches are taken away from the lesion as a result of which these peri-apical lesions turn into healing lesions. Also, the immediate implant placement is planned in such a way that the apex of the implant would land in the native bone rather than in the heart of the healing lesion, this provides early stability to the implant and prevents it from any deleterious effects of the remnant microbial flora in the healing lesions. Numerous clinicians and researchers alike tend to support the idea of immediate implants for various reasons which have biological, functional and aesthetic appeals. The minority of issues that arise in the event of a residual periapical infection or an adjacent tooth with an endodontic lesion hence should not stop the clinician from practicing immediate implants in infected sockets. Good surgical technique and clinical acumen definitively improves chances of success and provides favorable results hence decreasing the span of treatment, preventing buccal bone collapse and giving excellent emergence for the pontic.

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Volume 20 Issue 4 April 2021

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