Immediate Loading of Osseotite Implants: A Case Report and Histologic Analysis After 4 Months of Occlusal Loading

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A growing number of clinical reports show that early and immediate loading of endosseous implants may lead to predictable osseointegration; however, these studies provide mostly short- to mid-term results based only on clinical mobility and radiographic observation. Other methods are needed to detect the possible presence of a thin fibrous interposition of tissue that could increase in the course of time and lead to clinical mobility. A histologic evaluation was performed on two immediately loaded Osseotite implants retrieved after 4 months of function from one patient. He had received a total of 12 implants in the mandible, of which six were immediately loaded and six were left to heal in a submerged way. Clinical and histologic osseointegration was consistently achieved for both of the retrieved immediately loaded implants. Osteogenesis and bone remodeling on the Osseotite surface were not impeded by immediate loading as shown by histomorphometric evaluation, which revealed high levels of bone-to-implant contact ranging from 78% to 85%. This immediate loading protocol involving bilateral splinting of six Osseotite implants in the mandible proved to be successful after 4 months of loading. Further long-term clinical and histologic studies are needed before introducing this immediate loading protocol as a routine procedure in implant therapy.(Int J Periodontics Restorative Dent 2001;21:451–459.)

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