



Prevention and Treatment of Numbness after Implant Placement

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INTRODUCTION

The successful placement of dental implants can be expected when both systemic patient factors and local factors including bone height, width and quality are favorable. Additional local factors affecting implant placement includes anatomic landmarks. In the posterior mandible the Inferior Alveolar Nerve (IAN) is a major landmark. According to the literature implant dentistry has the second highest incidence rate for IAN damage after mandibular third molar removal [2,3]. The different causes for nerve damage, also includes inflammation and infection.

The exact etiology arising from the osteotomy preparation or placement of the implant, with implants that are too wide or too long being used. [4] It is understood that the most

serious complication of IAN damage includes altered sensation after implant placement, with an incidence reported as high as 13% [5]. Depending on the extent of the injury, the type of dyesthesia (abnormal sensation) can range from partial to complete anesthesia. However, due to the complex pathophysiology of IAN damage, the results of treatment are often disappointing with an estimated 25% of cases experiencing permanent effects of this iatrogenic damage [4].

The purpose of this case report is to present and discuss the treatment of a patient with complete anesthesia following implant placement into the inferior alveolar nerve canal.

CASE REPORT

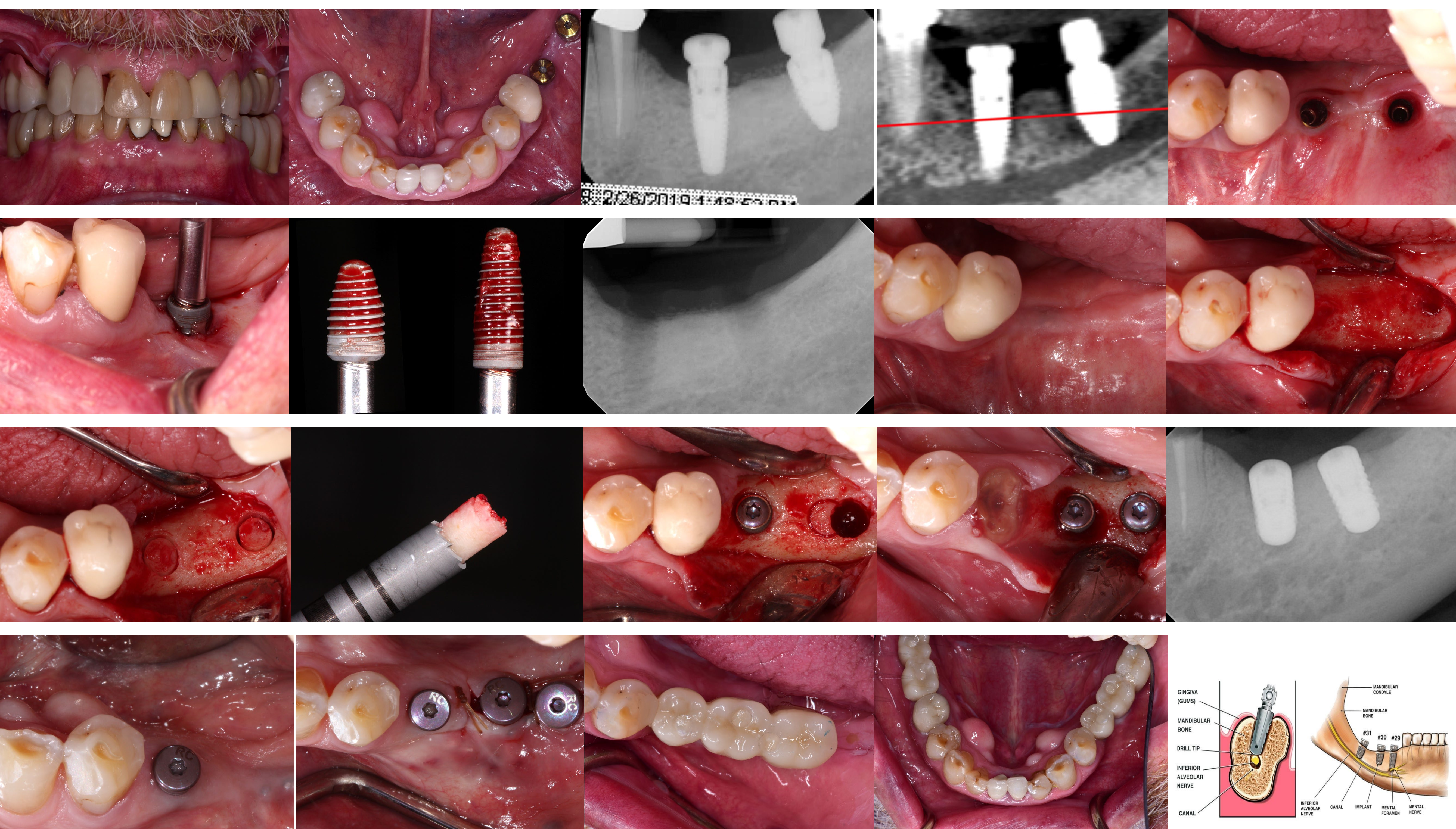
A 67-year-old man presented to the Ashman Department of Periodontology and Implant Dentistry of New York University College of Dentistry with pain and paresthesia of his left lower lip and chin following implant placement in private practice 6 months prior. A medical history review revealed no significant findings. The patient had undergone the placement of two implants in the posterior left mandible and had developed symptoms immediately after since. As well as the parasthesia and mild pain, the patient suffered psychological symptoms including loss of faith in the surgeon.

After carrying out a clinical examination and an initial radiographic examination (Peri-apical X-ray) it was assumed that the implants had possibly invaded the inferior alveolar nerve (IAN) canal. Consequently a CBCT scan was taken and confirmed a very close communication between both implants and the left IAN. The decision was made with the patient to have both implants removed as soon as possible and the following visit the patient returned for the uneventful removal of implants #18 & #19 using a reverse counter torque technique; the implants measured 5.0x8mm and 4.3x10mm respectively.

Following 3 months of healing, a new CBCT was taken and when reviewing the patient reported complete resolution of the discomfort he had experienced after implant placement, as well as an almost complete return of sensation to the lower left lip and chin. From a psychosocial perspective the patient seemed better as well with a noticeable improvement in mood and persona at subsequent visits. The patient was still interested in replacement of these missing teeth and therefore subsequent placement of two 4.1x8mm Straumann Bone Level implants was planned, without the use of any other augmentation procedures. The successful placement of implants in site #18 and #19 was achieved in two separate visits with the aim to identify the cause of any further nerve sensory changes. Patient reported no further pain or parasthesia in the following post-op visits.

After 3 months of healing, the patient returned for impression and final prosthesis was delivered another 3 weeks later. Patient reported complete resolution of nerve symptoms and was very satisfied with implant prosthesis.

SEQUENCE OF PROCEDURE



CONCLUSION

The most important conclusion gained from this report is that implants can be placed in the same vicinity as previously placed implants were removed due to nerve trauma, without recurrent parasthesia. This is particularly important in helping patients achieve their goal of recovering form and function when it comes to replacing missing teeth.

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