Surgical Considerations for New Implant Placement Following Inferior Alveolar Nerve Numbness

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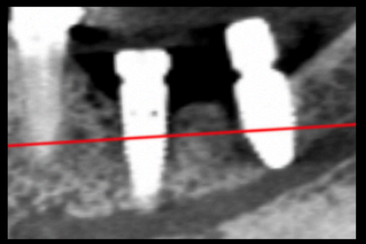
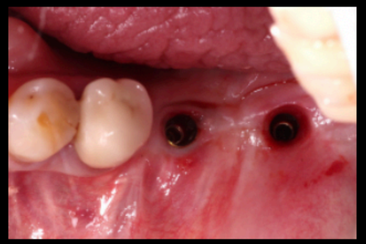
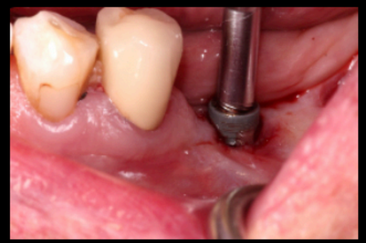
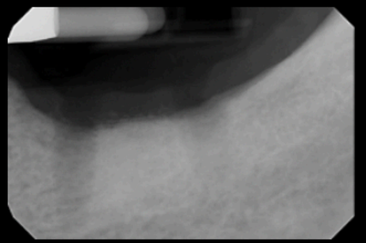
Introduction

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. One of the limitations of placement of implants in the posterior mandible is compression of the Inferior Alveolar Nerve. The purpose of this case report is to present and discuss the treatment of a patient with complete paresthesia of lower left quadrant following implant placement into the inferior alveolar nerve canal.

Materials and Methods

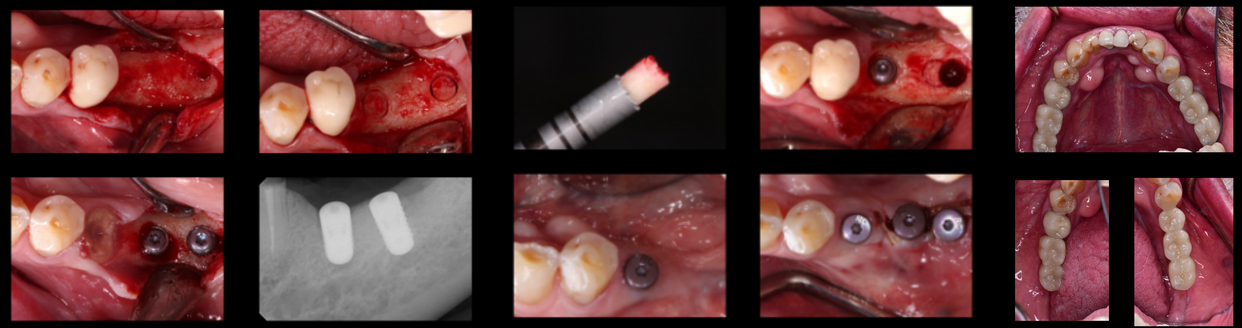
A 67-year-old male patient presented to the Implant Department at NYUCD with pain and paresthesia of left lower lip following implant placement in private practice 6 months prior. In the documented surgery implants #19 & #18 were removed uneventfully followed by placement of 4.1x8mm Straumann Bone Level implants to restore sensation in the lower left quadrant.



Results

Successful regeneration of sensation in lower left after removal of implants placed in close proximity to IAN. Successive implants were placed in the same sites and loaded after uneventful healing and followed up after 6 months. No paresthesia presented following subsequent implant placement



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Discussion

The recovery of sensation following nerve injury is dependent on the nature of the injury. Nerve injury can be either compression based, with different degrees of compression being described, or complete severing of the nerve. The recovery of sensation suggests that the patient had experienced a mild form of compression especially considering the implants were not removed in the so called “Early time frame” which much of the literature says is within 36 hours of implant placement. Very few studies comment on the psychological impact of paresthesia following nerve injury and implant placement and, in our case, this was a particularly important consideration. Managing this type of patient involves a combination of communication and minimally invasive procedures where possible.

Conclusion

Implants can be placed in the same vicinity as previously placed implants that were removed due to nerve trauma using pristine bone and awareness of anatomic structures, without recurrent paresthesia. This is particularly important in helping patients achieve their goal of recovering form and function when it comes to replacing missing teeth.