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Construction of a complete restoration with implants for a Hemangioma patient

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Introduction

To construct a complete restoration for a Hemangioma patient is an intragal procedure due to excessive bleeding when undue pressure is applied to the maxillary or mandibular ridges. Therefore, a complete set of dentures need to be constructed on osseo-integrated implants relieving this pressure and thus allowing sufficient masticatory function. The patient’s history, condition and laboratory procedure to be undertaken will be further discussed.

History

The patient is a forty-one year old female. Her condition excited from thirteen years of age after she cut her lower lip on a cooldrink bottle which resulted in excessive bleeding. Radiotherapy was done on her lip and chin and her four remaining maxillary and mandibular teeth were extracted.
**Condition**

The patient has Hemangioma which as a generic group are usually self-evident upon clinical examination. When they affect the mandible or maxilla, as in her case, a radiolucent lesion with a honeycombed pattern is expected. She has vascular problems as well as sensitive oral tissue. The patient has an oversized mandibular ridge as a result of radiotherapy.

**Background information**

30% of all Hemangiomas are visible at birth and 70% are visible within 1-4 weeks after birth. They occur five times more often in females than males. Approximately 83% occur in the head and neck area (the remaining 17% occur in the rest of the body both internally and externally). They are in some cases life threatening or severely problematic (such as interfering with eating, breathing, seeing, hearing, speaking, ect.) and require immediate aggressive intervention.

**Clinical procedure**

Implant placement was attempted on the mandibular ridge but during surgery as the surgeon opened the tissue exposing the bone, it was realized that the ridge had grown to resemble a knife-like edge. The surgeon then ground the mandibular ridge flatter to have a larger surface area for implant placement. The ridge was then sutured and allowed to heal. Implant placement will be attempted on a later date.
Possible treatment options

There are two possible treatment options with one been acrylic dentures with implants, with no tissue contact at all leaving the lingual and labial areas free of acrylic. The second option is similar to the first option except an anterior labial flange is incorporated. The second option was decided upon due aesthetic reasons and the patients self-confidence will be restored as she has shown signs of psychological problems due to her condition. The following laboratory procedure is merely the proposed procedure as the patient has not undergone implant placement at this time.

Option 1

Option 2
Proposed laboratory procedure

Surgical stent

It is used as guides for fixture placement during surgery. The stent is constructed from clear acrylic resin. Holes are drilled in the predetermined implant positions in the stent and then ready for surgery.\textsuperscript{2}
**Casted models**

The implants are placed into position during surgery. The impression is taken and then cast with tapered impression copings in place. The impression copings are positioned on the cast and secured in place by long guide screws.

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**Record blocks**

Record bases is fabricated by applying acrylic resin to the cast and then trimmed and polished. The centric relation record is made at the proper vertical dimension of occlusion. The mandibular record base is held securely in place by short guide screws, which enables the clinician to make accurate records.
**Trial dentures**

Trial dentures are made in the normal fashion. A matrix of plaster or dental stone is made of the denture and tooth position. The matrix is removed from the trial denture as well as the teeth. The teeth is then placed in the matrix, and placed on the model over the implant cylinders. The framework is then waxed up completely, sprued, casted, polished and finished.¹
The metal framework is then repositioned onto the master cast and then the matrix with the teeth are placed into position. The denture is then waxed up in this position. The denture with the framework is flaked, packed and finished in the normal fashion.

**Proposed prosthesis**

![Proposed prosthesis](image)

**References**


3. www.Hemangioma@Google.com