5/03/2014

**Samuel Bower – treatment report**

**The Patient:**

Samuel Bower aged 16 years from San Francisco, accompanied by his mother Dr. Birgitta Bower. Contact 052-6092465.

**Medical History:**

Healthy normal patient, good body development and muscular physique. No history of illness.

**Dental History:**

Orthodontic treatment for 2 years with complications of impaction of the right maxillary and right mandibular canines. These have been surgically exposed on 2 occasions, attachments placed with gold chain ligatures. Treatment has failed to erupt these teeth.

**On examination:**

Full metal braces in both jaws with fully erupted permanent dentition inclusive of second molars, but unerupted canines of the right side in each jaw. Radiographs and CBCT show both canines affected by pre-eruptive crown resorption (PEIR) involving about 1/3 of the crown tip area. Third molars present and unerupted.

**Diagnosis:**

PEIR is considered to be the cause for the non-response of these teeth to orthodontic traction.

**Treatment advised:**

Surgical re-exposure of the two impacted teeth, with superficial and partial removal of the resorption mush within the crowns of the teeth and filling the defect with inert filling material. Examine the attachments and, if necessary, replace them with eyelets. Immediate application of elastic traction from the attachments to the existing orthodontic archwire. Further treatment for maintenance of traction on the teeth to be referred back to the orthodontist.

**Surgical report:**

Patient was operated on March 5th, 2014 in the main operating theaters in Hadassah Medical Center in Jerusalem.

Chief surgeon: Prof. Rephael Zeltser

Chief resident: Dr. Ohad Schahar

Chief orthodontist: Prof. Adrian Becker

OR number 5. Under GA with nasal intubation which was fixated to the Columella and soft gauze packing the throat, the oral cavity was cleaned and rinsed with CHX in water base and skin was cleaned with CHX in alcohol 70% base.

Local anesthesia by Lidocaine 2% and adrenaline 1:100,000 were injected to the buccal upper and lower mucosa on the right side and to the palatal and lingual areas close to the impacted canines.

10 ml of Lidocaine was injected in total throughout the entire procedure.

**Impacted 43 tooth (right lower canine):** A buccal vertico-gingival mucosa flap was raised and a minimal lingual exposure was done to expose the 43 impacted tooth. Granulation tissues were curetted and a small widening of the exposed crown was done (without touching or exposing the CEJ). Using a low speed bur I removed the lingual resorbed dentin without exposing the pulp chamber. The area was rinsed and dried carefully. I etched the cavity and filled with self-curing Glass Ionomer cement. In order to prevent bone adhesion to the edge of the crown, I filled it with excessive amount that gave it a bulky overcontoured.

A ligature was attached to the orthodontic bracket and attached to the main wire (done by Prof. Becker). I rinsed the exposed area with N/S and sutured with a Vicryl 4/0 suture.

**Impacted 13 tooth (right upper canine):** A buccal trapezoid flap designed 1 mm from the 12 tooth margin exposing the buccal bone wall and the crown by removing granulation tissue and small amount of bone. This enabled us to expose the 13 impacted tooth. Bleeding in the palatal was stopped by Aviten (microfibrillar collagen). Granulation tissues was curetted and a small widening of the exposed crown was done (without touching or exposing the CEJ). Using a low speed bur I removed the mesiopalatal resorbed dentin without exposing of the pulp chamber. The area was rinsed and dried carefully. I etched the cavity and filled with self-curing Glass Ionomer cement. In order to prevent bone adhesion to the edge of the crown, I filled it with excessive amount that gave it a bulky overcontoured shape. The previous orthodontic bracket was loose and removed and a new one was attached to the crown by Prof. Becker. I rinsed the exposed area with N/S and sutured with a Vicryl 4/0 suture.

Both wires originating from the crowns’ brackets were pulled through the buccal gingiva mucosa by a vertical cut and attached to the main orthodontic wire.

All orthodontic treatments were done by Prof. Becker, at operation.

Extubation was simple and patient was transferred to the recovery room.

Recovery was uneventful and few hours later the patient was discharged from the recovery room back to his home

**Medications:**

8 mg Dexamethasone and 1 gr. Cefamezin were given IV

IV fluids clear crystalloids

Instructions and antibiotic treatment was given prior to his discharge.

Sincerely,

Prof. Rephael Zeltser