



TCAP Case Presentation

Presented to the Faculty of Our Lady of Fatima College of Dentistry

By Mike Lin



A Comprehensive Oral Management of a 32
Year Old Male Patient with Multiple Upper
extraction of Super-erupted Teeth and Root
Fragments and Bilateral Posterior Edentulous
Areas of the Mandible



PHASE I PRE-OPERATIVE PHASE



I. GENERAL PATIENT ASSESSMENT



General Patient Assessment





Patient's Profile

Name: Lim, Tomas

ASA Category: I

Birth date: December 03, 1980

Age: 32 years old

Gender: Male

High: 170 cm

Weight: 54kg

Nationality: Filipino

Civil Status: Single

Occupation: Helper

Religion: Roman Catholic

Address: 64 rosal street villa teresa subd, Valenzuela City



PHASE I PRE-OPERATIVE PHASE



I. GENERAL PATIENT ASSESSMENT



II. CHIEF COMPLAINT

"my teeth is not beautiful and my root fragment sometimes lacerate my tongue.

"

III. HISTORY OF PRESENT ILLNESS

- 4 years PTC, patient have tooth # 36, 37, 38, 46, 47, 48
 removed at Fatima dental wellnesss center, Upon to
 consultation, patient have notice tooth #18, 22, 26, 28
 root fragment and wants to remove it.
- 6 months ago patient noticed that posterior of his teeth are badly carious. Upon consultation, he claimed that all his carious teeth are asymptomatic for the past six months.
- According to the patient, he experienced difficulty in eating due to the retained root fragments on his posterior teeth and anterior teeth



IV. MEDICAL HISTORY

- The patient has neither been hospitalized for the past six months nor been diagnosed with any systemic diseases. He claims that he is not allergic to any food or medicine.
- He is not under any medication.



V. FAMILY HISTORY

- Father side: Have diabetes, but no hypertension and other systemic disease
- Mother side: Have ovary cancer
- Sister side: have not any systemic disease, and she does not take any drugs



VI. SOCIAL HISTORY

 He's been smoking more than 10 years, with an average of 1 pack per day. He does not drink alcohol



CLINICAL EXAMINATION

VII. Vital Signs

+‡+

	Patient	Normal Value
Blood Pressure :	120/65 mmHg	120/80 mmHg
Respiratory Rate:	16 times/min	12-20 times /min
Pulse Rate :	70 times /min	60 / 100 times/min
Body Temperature :	36.4 ℃	37 ℃

IX. Facial Examination

	Normal	Abnormal
Eyes	✓	
Lips	✓	
facies	✓	
Facial symmetry	✓	
Facial profile	✓	
TMJ	~	

	Swelling	Tenderness	Redness
Floor of the mouth	X	X	X
Parotid gland	X	X	X
Submandibular gland	X	X	X
Lymph nodes	X	X	X
Thyroid	X	X	X
Anterior triangle	X	X	X
Posterior triangle	X	X	X

X. Intra-oral Examination

Right Lateral



Left Lateral



Upper Arch



Lower Arch

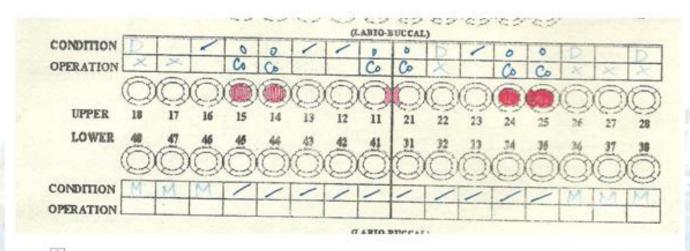




Anterior



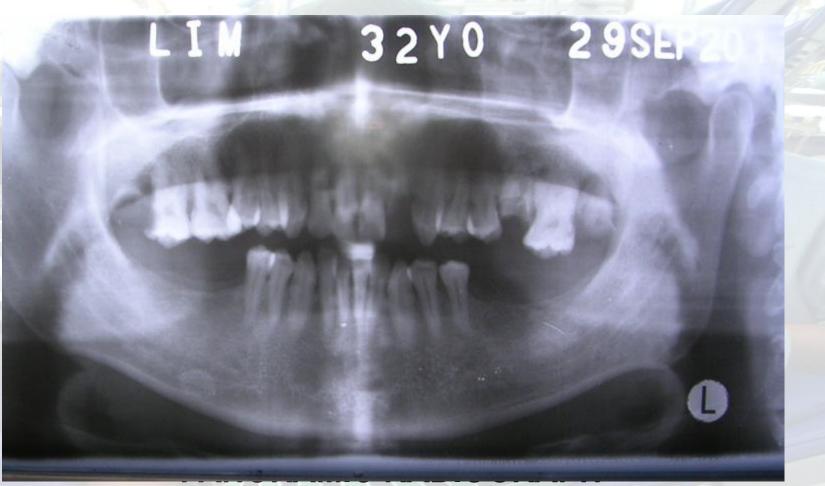
XI. Dental Examination



	Clas	ss I	Class II	Class III		
Occlusion	✓		X	X		
Calcular Deposits	Slight		Slight Moderate		Moderate	Severe
Soft			X	X X		
Hard	✓	✓ X				
Congenital Anomalies	None	Presen	t Sı	ecify		
Supernumerary	V					
Supra-Eruption		~	#:	17,27		
Caries Activity		#11,14,15 ✓ ,24,25,				
Abrasion	V					
Attrition	~					
Fractured Tooth		1	#18,	22,26,28		
Stains	✓		#11,1	2,13,21,23		

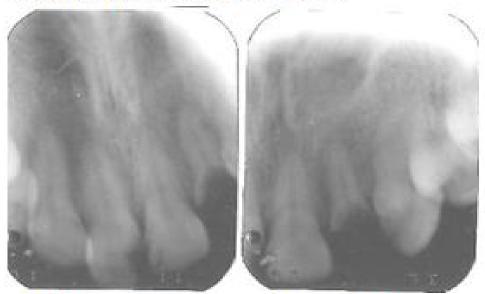


RADIOGRAPH INTERPRETATION

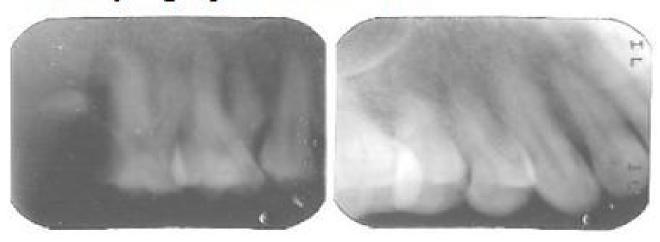


XIII. Periapical Radiograph

Maxillary incisor & Canine



Maxillary Right premolar & Molar

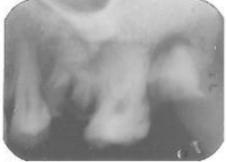






Maxillary Left premolar & Molar





Mandibular Incisor



Mandibular Right premolar

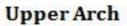


Mandibular Left premoalr





XIV. Diagostic Cast





Left Lateral



Lower Arch



Right Lateral





XV. Dental Examination

£.

First quadrant (upper right)		
Tooth #11	- Class III carious lesion (MI)	
Tooth #12	- Sound with stain	
Tooth #13	- Sound with stain	
Tooth #14	- Class I carious	
Tooth #15	- Class I carious	
Tooth #16	- Sound	
Tooth #17	- Class II carious DO	
Tooth #18	- Root fragment	
Second Quad	rant (upper left)	
Tooth #21	- Class III carious lesion (MI)	



Tooth #22	- Root fragment	
Tooth #23	- Sound with stain	
Tooth #24	- Class I carious lesion	
Tooth #25	- Class II carious lesion (MO)	
Tooth #26	- Root fragment	
Tooth #27	- Class I carious lesion	
Tooth #28	- Root fragment	

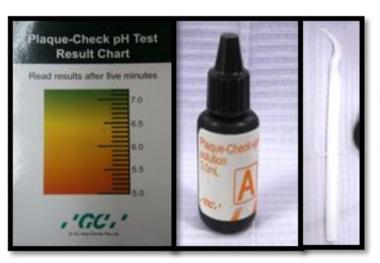


Third Quadra	ant (lower left)
Tooth #31	- Sound
Tooth #32	- Sound
Tooth #33	- Sound
Tooth #34	- Sound
Tooth #35	- Sound
Tooth #36	- Missing
Tooth #37	-Missing
Tooth #38	- Missing
Fourth Quad	rant (lower right)
Tooth #41	- Sound
Tooth #42	- Sound
Tooth #43	- Sound
Tooth #44	-Sound
Tooth #45	- Sound
Tooth #46	-Missing
Tooth #47	-Missing
Tooth #48	- Missing



PLAQUETEST

Armamentarium:

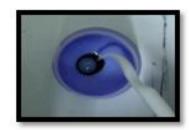


- o Plaque-Check pH Test result chart
- o Plaque-Check pH Test Solution
 - o applicator

Procedure:

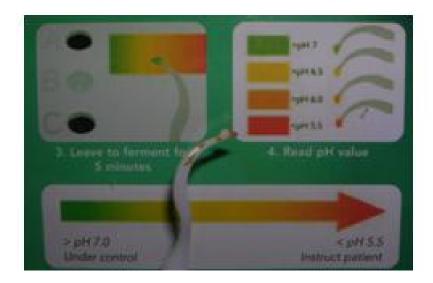
- A small amount of <u>interproximal</u> plaque was gathered from the oral cavity of the patient using a disposable material.
- The sample is then dipped for 1 second on the GC Plaque check solution and change in color is observed.







- 3. Result was interpreted after 5 mins using the Plaque-check pH test Chart.
- 4. Results show a pH of 5.5 indicating that the oral environment is out of balance and preventive action is required.



XVI. Treatment Plan

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Date		Procedure	Alternative treatment
12/12, 2012	 History Taking Oral Examination Plaque test Intra-oral and Extra-Oral photographs Scaling and polishing Impression taking for study Cast Radiograph: panoramic and periapical 		treatment
12/13, 2012	Oral hygiene Instruction Tooth #28 Dx: #Root fragment	Tooth Extraction	Tooth Extraction
12/19, 2012	Tooth #26,27 Dx: #26 Root fragment Dx: #27 Super-erupted tooth	Tooth Extraction	Tooth Extraction
1/9, 2013	 Tooth # 17,18 Dx: #18 Root fragment Dx: #17 Super-erupted tooth 	Tooth Extraction	Tooth Extraction
1/17, 2013	> Tooth #22 Dx: #22- Root fragement	Tooth Extraction	Tooth Extraction
2/15, 2013	> Tooth #21,24,25,15,14	Tooth-Colored	RCT and

1967		 Dx :# 21 Class III caries Dx :#24 Class I caries Dx :#25 Class II caries Dx :#15 Class I caries Dx :#14 Class I caries 	Restoration	PFM
	2/21, 2013	> Tooth #11 > Dx: Chronic Ulcerative Pulpitis	➤ Endodontic Treatment ➤ Pulp Diagnostic test ➤ X ray taking ➤ Crown Build up ➤ Access preparation MAF IAF ,working length determination	Tooth extraction
	2/28, 2013	> Tooth #11	Obturation & Final restoration	
	3/1, 2013	 Rest & Seat preparation Final impression taking 		
	3/5, 2013	Metal Frame work try in, teeth set up		
	3/6, 2013	➤ Veneer on Teeth #13,12,11,21,23		
	3/7/2013	Pontic set up & try in		
	3/8/2013	> RPD installation		

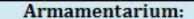


Surgical Phase (Phase II)



Diagnosis	Oral condition	Radiographic Examination
 Tooth #17 - Chronic apical periodontitis Tooth #18 - Apical Abscess, Chronic apical periodontitis 		17
 ➤ Tooth # 26- Apical Abscess, Chronic apical periodontitis ➤ Tooth # 27- Chronic apical periodontitis ➤ Tooth # 28- Chronic apical periodontitis 		26 27 28
➤ Tooth # 22- Chronic apical periodontitis		





Basic instrument:

Mouth mirror Explorer Cotton pliers



Antiseptic:

Betadine anti-septic solution (1% Povidone-Iodine)



Anesthesia instrument:

Topical anesthesia Gel (Lido-Gel) Syringe

Lidocaine 1.8ml (HCL 2mg/0.01mg with epinephrine 1:100,000) Needle (long 276*13/16",short

306+13/16")



Extraction Instrument:

Elevators

Gum separator

Gauze

Forceps (18L(left maxillary molar), 18R(right maxillary molar), 69(Maxillary root pick))

Chisel

Mallet





Instrument of flap:

Scalpel with blade (#3scalpel,#15

blade)

Molt periosteal elevator #9

Minesota retractor

Surgical instrument:

Rongeur forcep

Bone file

Soft tissue scissor

cellulostat

Irrigating material:

Irrigating syringe

Normal saline solution

Suturing material:

Suture thread (silk, non-resorbable)
Suture needle (half circle with eyes)
Needle holder





- Computation of Anesthesia
- Milligram of local anesthetic per dental cartridge:
- 36mg/carpule (2%lidocaine *1.8ml carpule)
- Patient's weight:
- 2mg/lb = 4.4mg/kg
- Patient's weight: 54kg
- 54 * 4.4 = 237.6
- 237.6 / 36 = 6.6
- Maximum recommended dosage: 6.6 carpules (Lidocaine with vasoconstrictor)



The sequence of extraction

First appointment:

Second appointment:

#17= #18

Third appointment:

#22



- Procedure:
- •
- Surgical procedure involved:
- Tooth extraction closed technique on tooth
- #28
- #26,27
- #17,18
- #22
- Clinical procedure proper:
- Patient was instructed to gargle with antiseptic mouth rinse for 1 minute..
- Gauze was used to dry the tissue around the site of needle penetration.
- Topical anesthesia was applied at the site of needle penetration for a minimum of 1minute.



Topical anesthesia was applied at the site of needle penetration for a minimum of 1minute.







Administration of local anesthesia (2% lidocaine with 1: 100,000 epinephrine)

The anesthetic technique:

Tooth #17, 18 -posterior superior alveolar nerve block, greater palatine

nerve block.



Tooth # 22 - local infiltration to the terminal nerve ending of anterior superior alveolar nerve and nasopalatine nerve.





#26, 27, 28 - middle superior alveolar nerve block, posterior superior alveolar nerve block, greater palatine nerve block.



- After local anesthesia is obtained, extraction of tooth by:
 - Loosening of soft tissue attachment from the tooth by using gum separator.







2. Straight elevator was applied to further mobilize the tooth.



3. Forceps was adapted to the root of the extracted tooth.





 Tooth sockets were curetted to remove necrotic tissue and bony debris.

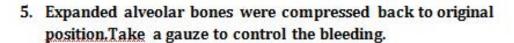












Wounds were sutured using the simple interrupted technique with 3-0 non-resorbable silk sterilized suture.

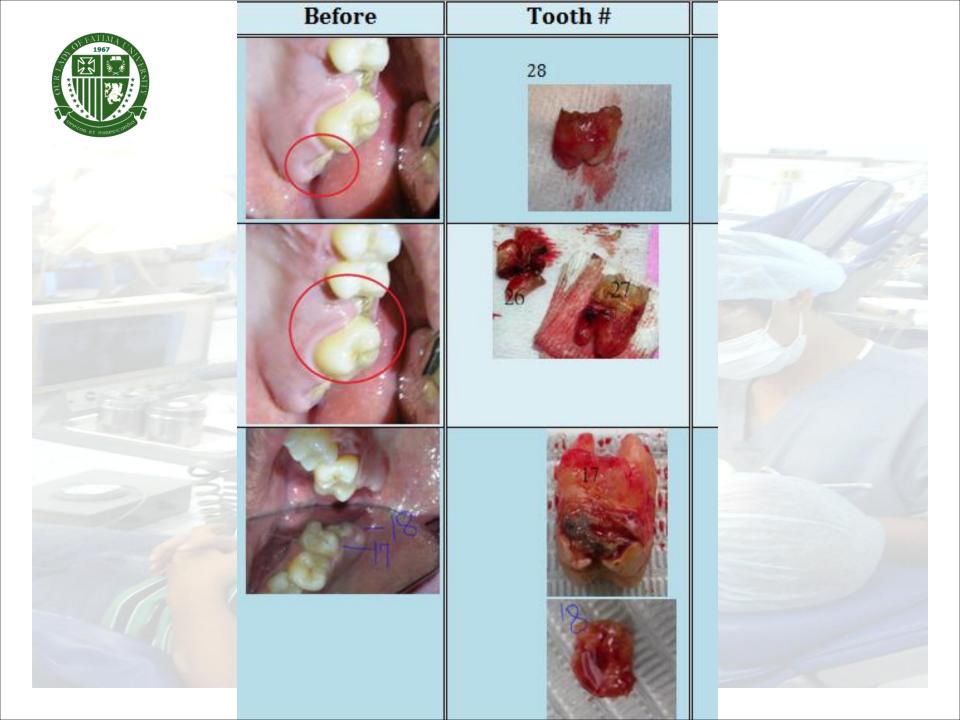




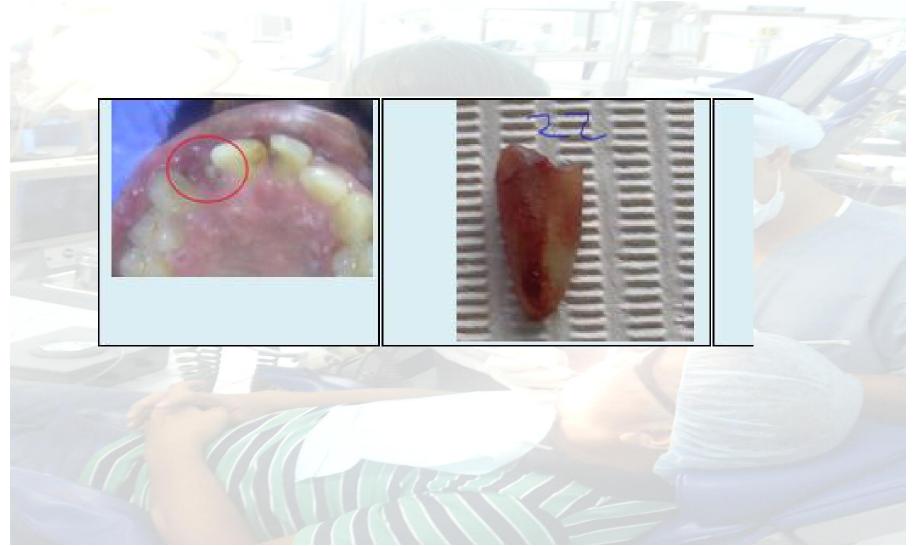


List of postoperative instructions was provided and the patient was appointed to come back after 1 week for suture removal.









Prescription:

Rx:

1. Mefenamic acid 500 mg

Disp 9 capsules for 3 days

Sig: Take 1 capsule right after surgery and 1 capsule every 8 hours, if pain persist.

2. Amoxicillin 500 mg

Disp: 21 caps

Sig: 1 capsule tid for 7 days.

3. 1% Providing iodine

Disp: 1 bottle

Sig: gargle for 30 seconds, every 6 hours for 7days.

Postoperative instruction:

- Drink plenty of fluids. (do not use a straw) and high calorie diet for the first 12-24 hours.
- 2. Using 1% providine iodine solution rinses twice daily for 1 week .
- The swelling that is normally expected is usually proportional to the surgery involved. This is the body's normal reaction to surgery and eventual repair.
- The swelling may be minimized by the immediate use of ice packs or eat the ice cream.
 - After 24 hours, ice has beneficial effect.
 - After 36 hours, the application of moist heat to the side of the face is beneficial in reducing the size of the swelling.





- After 24 hours, gentle rinsing with warm water to removes food particles and debris from the socket area and thus helps prevent infection and promotes healing.
- Sutures are placed the area of surgery to minimize postoperative bleeding and to help healing. The sutures will be removed approximately 1 week after surgery.
- Call the clinician if there is heavy bleeding, severe pain or continued swelling for 2 or 3 days.







Tooth Condition:

First quadrant (upper right)	Second Quadrant (upper left)		
> #14 - Class I carious lesion (0) > #15 - Class I carious lesion (0)	> #21 - Class 3 carious lesion (MO) > #24 - Class 1 carious lesion (O) > #25 - Class 2 carious lesion (MO)		
Fourth Quadrant (lower right)	Third Quadrant (lower left)		
> None of restorative treatment	> None of restorative treatment		

Procedure:

- 1. Use the round bur to remove the caries.
- 2. Cavity preparation
 - -Beveling of cavosurface margin.





3. ulp protection (if near pulp)

-Calcium Hydroxide (Dycal) was placed on the gingival floor of the cavity as base.



4. Filling (composite)

Acid etching with 37% phosphoric acid for 15 seconds.



- Water spray for at least 10-20 seconds to remove the acid.
- Air spray to dry the tooth and isolate the tooth with rubber dam.
- Air spray to dry the cavity then bonding agent was applied over cavity walls.





- Spray air to produce thin film layer.
- Light cure for at least 10 seconds.





Selection of tooth shade.



- Composite resin was injected incrementally into the cavity.
- Followed by light cure for at least 10 seconds for initial curing.
- Then light cure for 20 seconds after curing of the last layer.
- Trim the excess composite using the composite trimmer.
- Finish and polish, smoothing the restoration using a flexible disk, rubber or other polishing materials.



Before Treatment	After Treatment		
Tooth #21	Material using:		
Dx: Class III	Composite resin.		
carious lesion (MO)	Tooth shade: A3		
Tooth #24	Material using:		
Dx: Class I	Composite resin.		
Carious lesion (0)	Tooth shade:		
	A3.5		

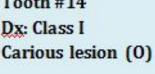




Tooth #25 Dx: Class II Carious lesion (MO)



Tooth #14 Dx: Class I Carious lesion (0)





Dx: Class II Carious lesion (0)



Material using: Composite resin. Tooth shade: A3.5



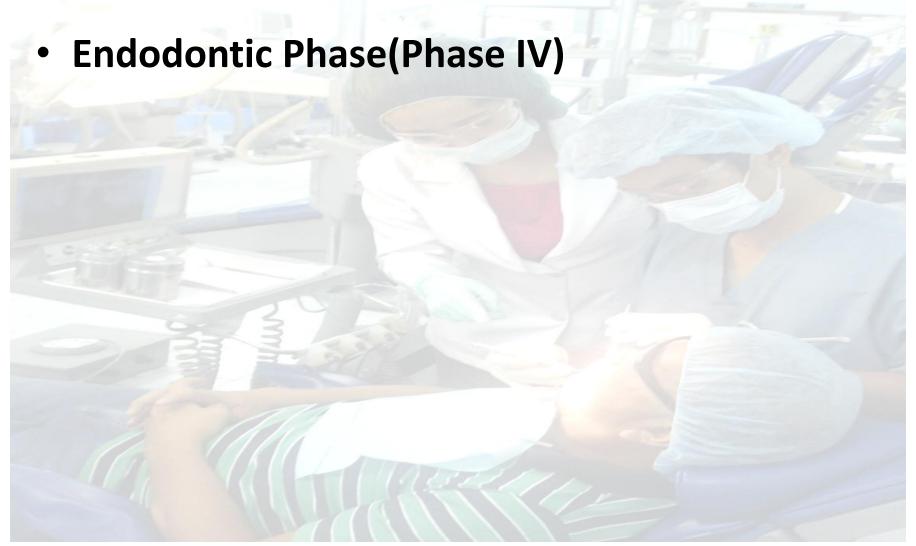
Material using: Composite resin. Tooth shade: A3.5



Material using: Composite resin. Tooth shade: A3.5







Chief Complaint:

"There is a big cavity on my anterior teeth. It is hard for me to eat and clean."



History of present illness

Patient felt sensitive when drink cold, and he does not feel any painful now.

Subjective symptoms (pain):

Sharp	X	Intermittent	X
Dull	X	Throbbing	X
Diffused	X	Continuous	X
Localized	X	On mastication	X
On lying down	X	Aggravated by sour	X
Aggravated by sweet	X	Increased by heat	X
Increase by cold	X		

Objective symptoms:



X	Lymph node involvement	X
X	Submaxillary	X
X	Submental	X
X		
	X X X	involvement X Submaxillary

Diagnostic Test:

	Involved tooth	Control teeth		
	Lesion Tooth #11	Adjacent Tooth#12	Contralateral Tooth #31	
Diagnostic Test	Response/Time elapsed	Response/Time elapsed	Response/Time elapsed	
Heat Test	2	2	2	
Cold Test	+ (7 sec)	7	-	
Mobility	(1 - 0	-	-	
Palpation	(SE)	+	-	
Percussion	CE:	+		



Radiographic findings:

Pulp chamber	Root canal	
X	X	
X	X	
X	X	
	X	X

	Periapical region
Periodontal membrane normal	×
Periodontal membrane widened	x
Circumscribed rarefied area	x
Diffused rarefied area	×
Thickened lamina dura	×

Etiology:

Caries	V	Attrition, abrasion	X
Iatrogenic	X	Trauma	X

Crown fracture X Deep - seated rest w/o a base	oration X
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Working diagnosis:

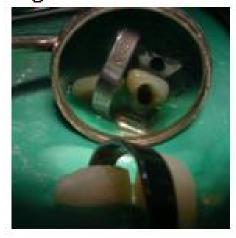
Chronic ulcerative pulpitis on tooth #11

Procedure:

 Administration of topical and local anesthesia. (2% lidocaine with 1: 100,000 epinephrine)



- 2. Access preparation. (for crown)
 - Carious lesion was excavated with spoon excavator and an opening was made with round bur to gain access into the canal.

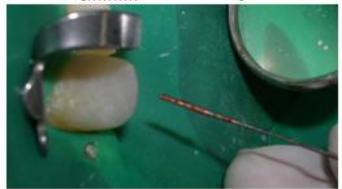


- 3. Crown build up with composite
- 4. Rubber dam set-up



5. Pulp extirpation:

- · Pulp tissue was removed with a broach.
- Pulp chamber and canal were irrigated with diluted sodium hypochlorite solution (NaOCl: H2O = 1:9)



6. working length determination:

- using a ruler to measure the length of root canal for determine the initial working length.
- Initial apical files were placed into the canal and a radiograph was taken to determine the final working length.

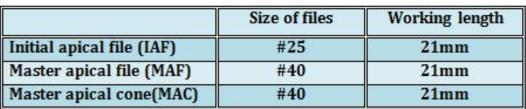
	Radiograph Length	Initial working Length	Final Working Length(WL)
Tooth #11	24mm	22mm	21mm

7. Biomechanical preparation:

- Use #25 root canal file, 21mm to prepare the root canal.
 The #25 root canal file, 21mm is IAF.
- Use #25 to #40, root canal file, 21mm to prepare the root canal.
 The #40 root canal file, 21mm is MAF.







- Serial preparation and Step-back technique were carried out, accompanied with copious diluted NaOCl irrigation.
 - Recapitulation:

it is accomplished by taking a small file to the correct working length to loosen accumulated debris and then flushing it with 1 to 2 ml of irrigant.

Serial preparation:

 Apical region is prepared for least 3-4 size bigger than IAF and when the MAF reaches the working length.









Size of files	Working length		Size of files	Working length	
#25	21mm	Irrigation			
#30	21mm	Irrigation	#25	21mm	Irrigation
#35	21mm	Irrigation	#30	21mm	Irrigation
#40	21mm	Irrigation	#35	21mm	Irrigation

 Irrigate with diluted sodium hypochlorite solution (NaOCl) every after insertion of each file.





Step - back method:

 Prepares the canal use an increase size with decrease length of file, sequentially.





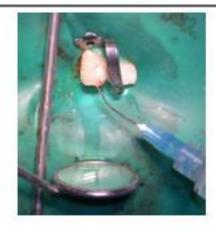






Size of files	Working length		Size of files	Working length	
#45	20mm	Irrigation	#40	21mm	Irrigation
#50	19mm	Irrigation	#40	21mm	Irrigation
#55	18mm	Irrigation	#40	21mm	Irrigation
#60	17mm	Irrigation	#40	21mm	Irrigation
		Circumfere	ntial filing:	#40	1000

 Irrigate with diluted sodium hypochlorite solution (NaOCI) every after insertion of each file.



Intracanal dressing:

Calcium hydroxide powder mixed with local anesthetic solution (2% lidocaine with 1:100,000 epinephrine) was placed into the canal with a K-file and temporary sealed with Fermin or IRM.



Patient was scheduled to recall after 1 week for further check the absence of any symptom and the intracanal medicament to take effect. Correctly performs the spreader test to confirm. If the canal is prepared enough for obturation.

Master cone trial:

After circumferential filing against canal walls and copious irrigation,
 Gutta Percha was fitted - in to obtain the master cone.

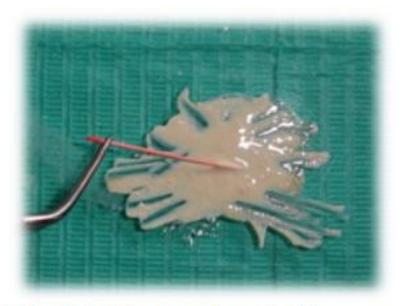




8. Obturation:

- Before obturation, the canal was irrigated with normal saline solution and checked. If it was suitable to be obturated.
- Paper points were inserted to completely dry the canal.
- Zinc Oxide Eugenol (ZOE) paste was initially placed upon canal walls with Lentulo spiral.





- Master cone coated with ZOE was fitted in to the canal, up to the working length and accessory cones were condensed by lateral condensation technique (Endodontic spreader) to fill the voids.
- When the canal is completely filled with obturating material. Take a radiograph to assess the presence or absence of voids.

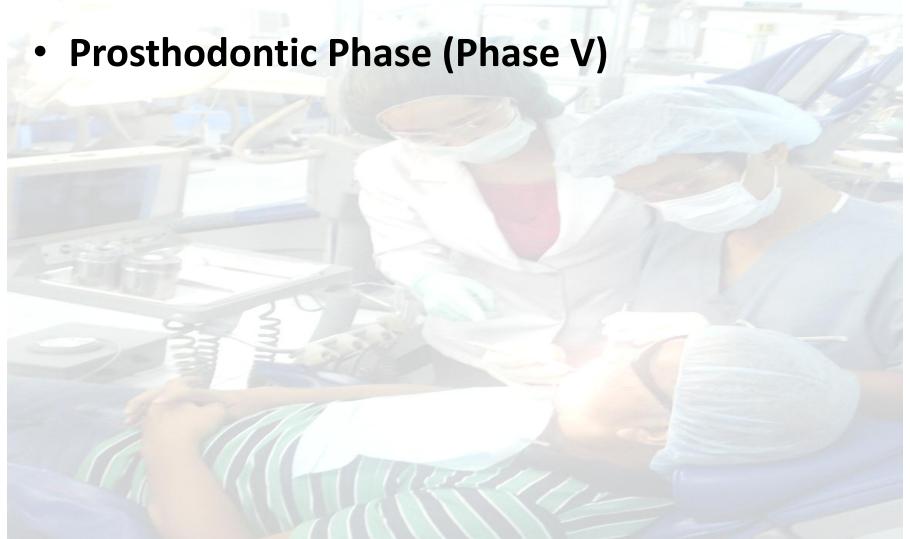


- If the radiograph shows the canal is completely filled. Cut the excess Gutta Percha with heated instrument. And condense the obturating material by endodontic plugger.
- Cleaning the cavity and temporary filling.
- If patient feels painful (Phoenix abscess) after endodontic treatment.

 Asking patient to take the anodyne for release the pain.







Removable Partial Denture (RPD)

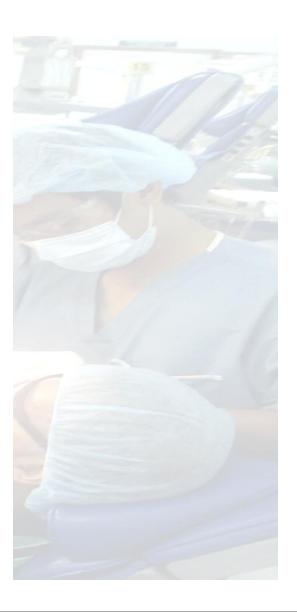
Procedure:

- 1. Preliminary impression taking.
- 2. Inter occlusal record for diagnostic cast.
- 3. Articulated diagnostic cast.
- 4. Individual tray making.



- 5. Survey and pencil design on diagnostic cast.
- 6. Mouth preparation for rest.

ity



7. Final impression for upper and lower arch.





- Inter-occlusal record for master cast.
- Articulated master cast.
- Master cast surveying.
- Refractory cast.
- Wax pattern of framework.



DESIGN

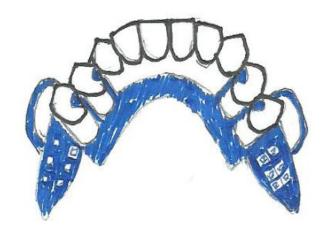


Lab. Instructions:

Aker on Dista of tooth 25
er
esal side of tooth 14
ooth 2 Distal and 23
Retention Design
-



DESIGN



Lab. Instructions:

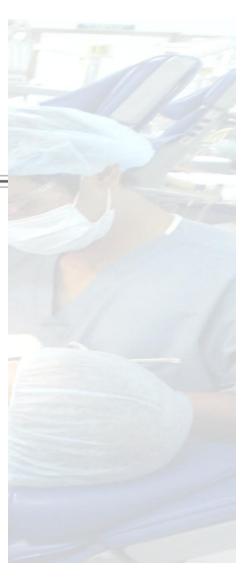
1.	Major Connector Lingual Bar
2.	Direct Retainer RPI on touth 35 and 45
3.	Indirect Retainer Rest & Seat on Mesial side of 34 & 44
4.	Guide Planes
	Denture Base Retention Design open latice

13. Try - in of metal framework and adjustment.



- 14. with artificial pontics set up.
- 15. Delivery of finished RPD.
- 16. Installation for final processing of RPD.









Post - insertion instruction:

- If going to sleep, soak it in the denture solution; if there is no solution.
 Store it in a sealed container. Do not boil your denture.
- Do not drop the denture.
- Do not attempt to repair, if it was broken. Calling your clinician to get it fixed.
- Brush your denture using a soap. Hold it in a manner that it is resting on your palm. Make sure you wash it over a basin. So that if it falls, it will fall in the basin.
- 5. If pain is felt. Do not attempt to remove the cause by trimming the denture. Calling your dentist for trimming and polishing.









