

MINISH Case Presentation: Traumatic Dental Injury

한국생체모방치의학회 2024 추계학술대회

더스퀘어치과 홍준기

홍준기, Joonkee Hong, DDS, PhD

서울대학교 치의학대학원 졸업

서울대학교 보철학교실 박사

통합치의학 전문의

광화문 더스퀘어치과

미니쉬 아카데미 1기 수료

MMC 가입



MINISH

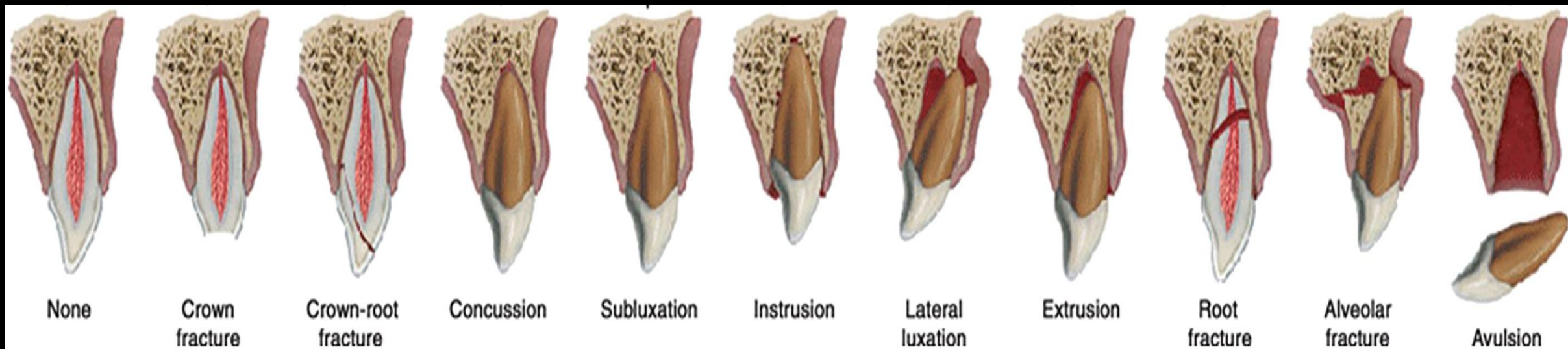


- 미니쉬는 치아 복구 솔루션입니다. 썩고, 깨지고, 닳아진 치아를 원래대로 구성과 형태를 복구합니다.
- 미니쉬 치료 후의 아름다운 모습은 손상되거나 불편한 치아를 치료한 결과로 얻을 수 있는 상승 효과입니다. 단순히 예뻐지기 위해 건전한 치아를 희생시키지 않습니다.

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International Association of Dental Traumatology guidelines

TABLE 2 Permanent dentition follow-up regimes

	2 W	4 W	6-8 W	3 M	4 M	6 M	1 Y	Yearly up to at least 5 Y	Generic outcomes to consider collecting as identified by the Core Outcome Set	Injury-specific outcomes to consider collecting as identified by the Core Outcome Set
Infraction	No follow up									
Enamel fracture			*R				*R		Periodontal healing (including bone loss, gingival recession, mobility, and ankylosis/resorption)	Quality of restoration
Enamel/dentin fracture			*R				*R			Loss of restoration
Crown fracture			*R	*R		*R	*R		Pulp healing (including infection)#	
Crown/root fracture			*R	*R		*R	*R	*R	Pain	Quality of restoration
									Discoloration	Loss of restoration
Root fracture (apical third, mid-third)		*S*R	*R		*R	*R	*R	*R	Tooth loss	Root fracture repair
									Quality of life (days off work, school, and sport)	
Root fracture (cervical third)		*R	*R		*S*R	*R	*R	*R	Aesthetics (patient perception)	
									Trauma-related dental anxiety	
Alveolar fracture		*S*R	*R		*R	*R	*R	*R	Number of clinic visits	Infra-occlusion
Concussion		*R					*R		Periodontal healing (including bone loss, gingival recession, mobility, and ankylosis/resorption)	
Subluxation	(*S) *R			*R		*R	*R		Pulp healing (including infection)#	
Extrusion	*S*R	*R	*R	*R		*R	*R	*R	Pain	Infra-occlusion
Lateral luxation	*R	*S*R	*R	*R		*R	*R	*R	Discoloration	
Intrusion	*R	(*S) *R	*R	*R		*R	*R	*R	Tooth loss	Infra-occlusion
									Quality of life (days off work, school, and sport)	Realignment—where spontaneous repositioning undertaken
Avulsion (mature tooth)	*S*R	*R		*R		*R	*R	*R	Aesthetics (patient perception)	Infra-occlusion
									Trauma-related dental anxiety	
Avulsion (immature tooth)	*S*R	*R	*R	*R		*R	*R	*R	Number of clinic visits	

Treatment flow for traumatic teeth

- Diagnosis & Treatment plan
- Treatment for Alveolar bone
 - Reduction
- Root & Pulp treatment
 - Root canal treatment
- Restoration on chipped / broken crown
 - Direct restoration, Indirect restoration
 - MINISH

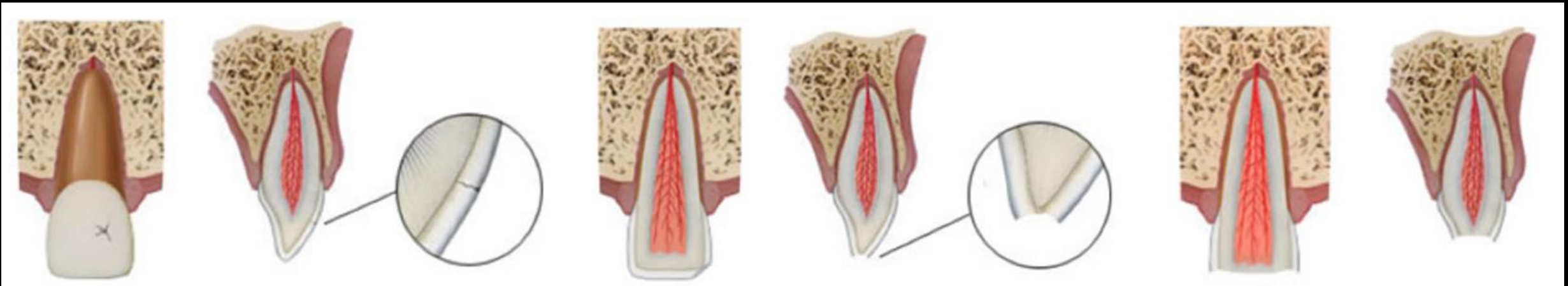
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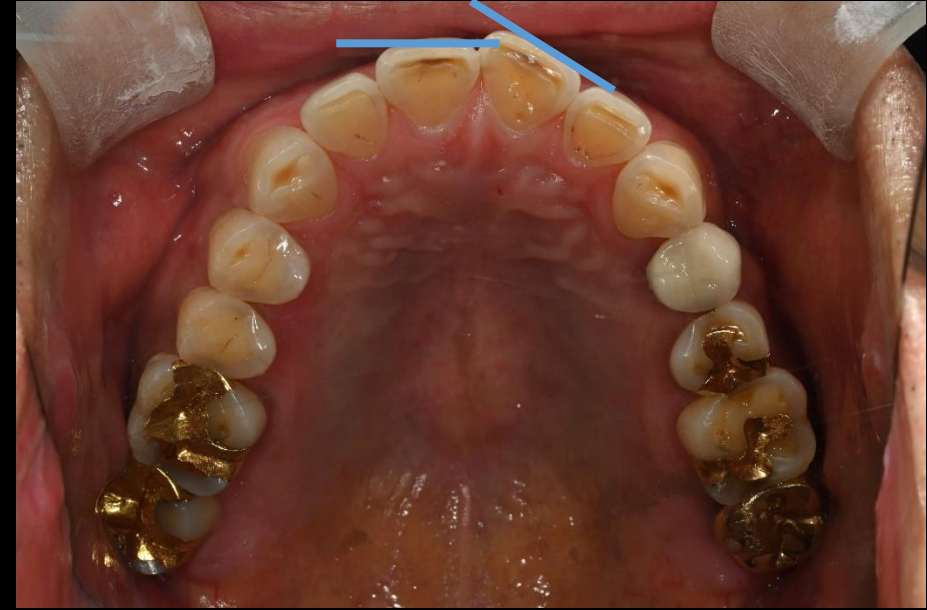


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Case Review

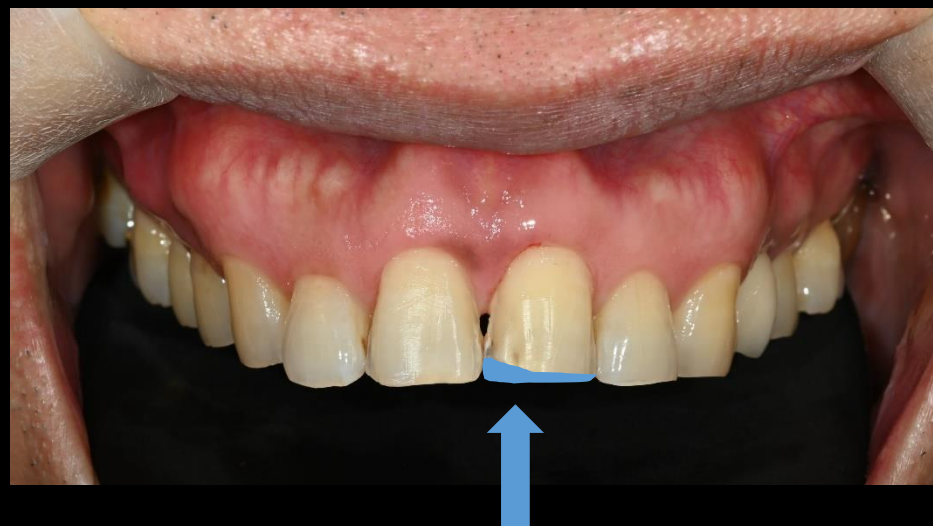
- Crown fracture
 - Infraction
 - Enamel fracture
 - Enamel / Dentin fracture

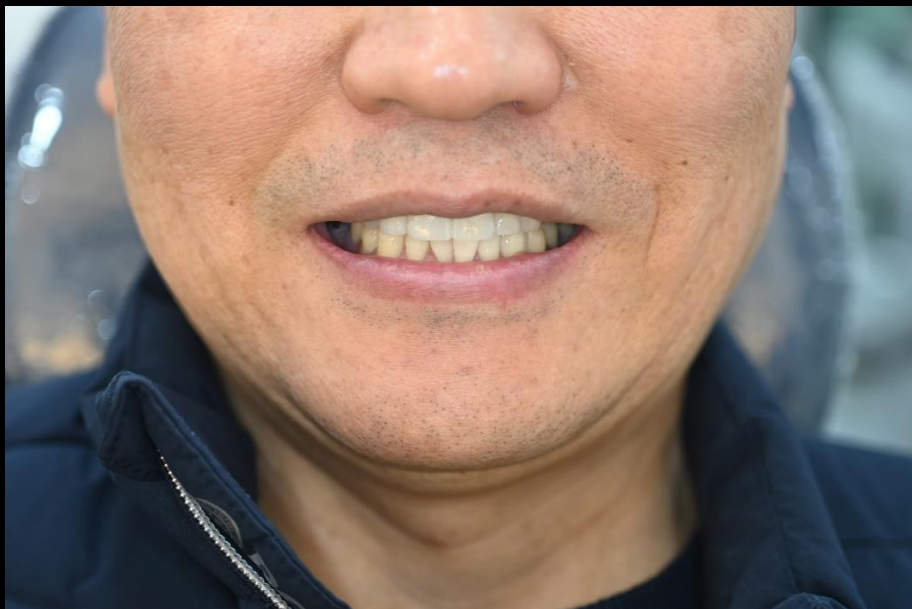




54 / M
#11, 21 enamel fracture
#21 rotation
Black triangle







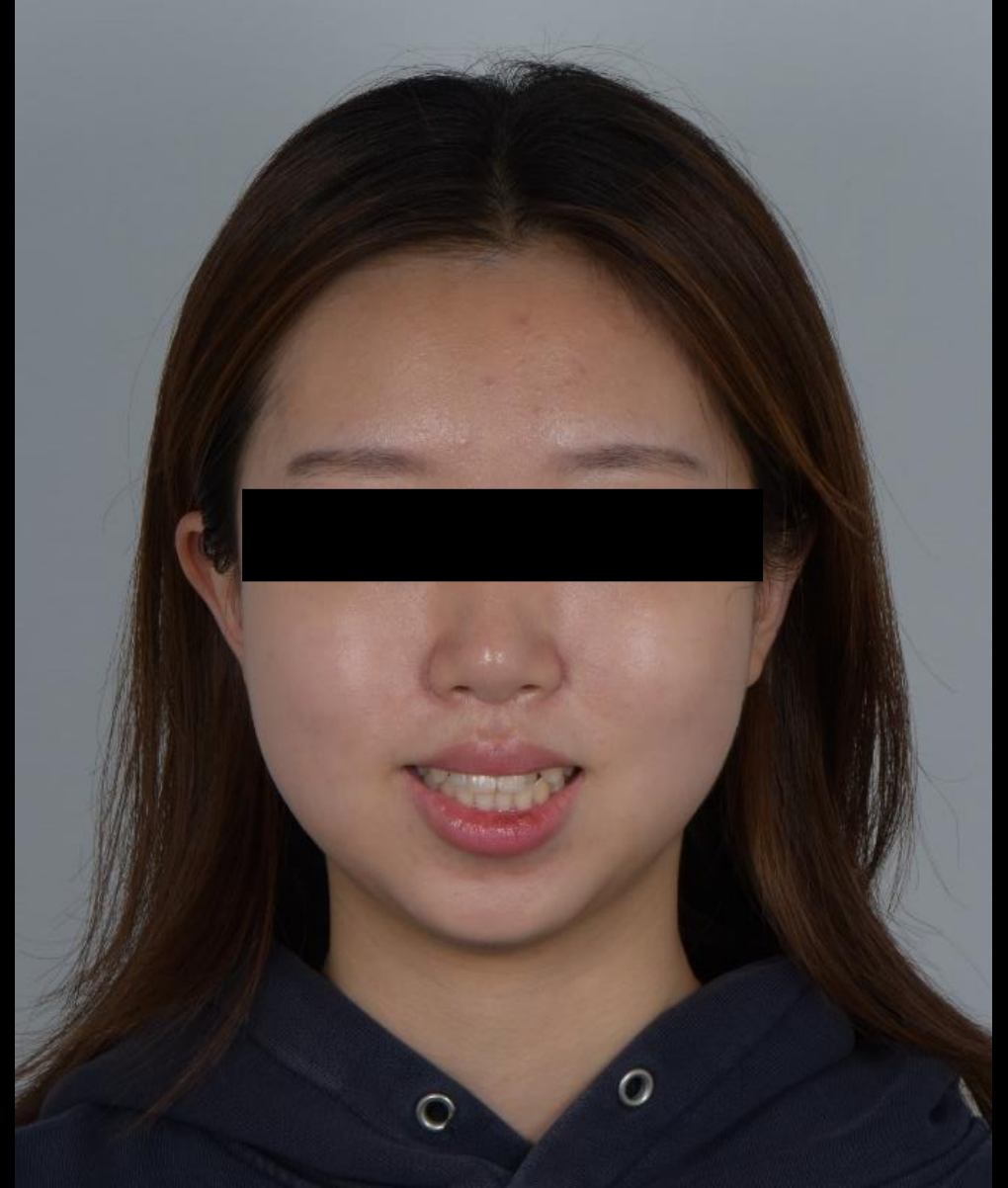








19 / F
#11,21 enamel dentin fracture
Tx: 2 anterior MINISH









41 / M

#11,21 enamel / dentin fracture

#11,21 air(+), per(+), mob(+)



Reattachment of tooth fragments

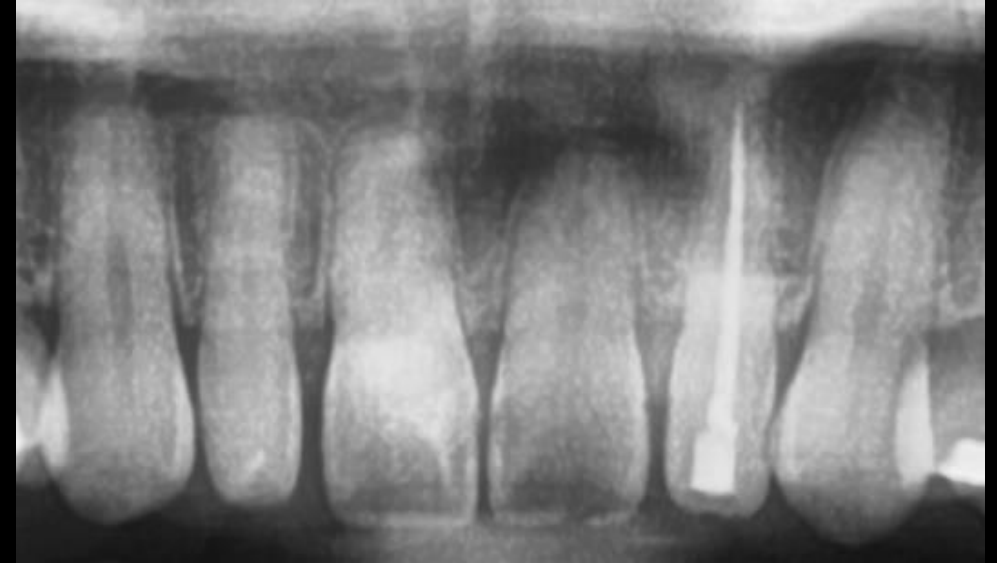
2W f/u

#11 21 air(-), per(-), mob(-)

Tx: #11 21 MINISH







29 / F

#21 enamel fracture

#11, 21 proximal cares

#12, 22 peg lateralis

#22 endo state, internal discoloration

Tx: 4 anterior MINISH







Case Review

- Crown & Root fracture
 - Complex of Implant prosthesis & MINISH
 - Root canal treatment & MINISH
- Intrusion / Extrusion / Luxation
 - Displacement of teeth position



Enamel-dentin-pulp fracture



Crown-root fracture without pulp involvement



Crown-root fracture with pulp involvement



Concussion



Subluxation



Extrusion



Lateral luxation



Intrusion



Avulsion



31 / M
#11,12 intrusion
#11,12,21 enamel fracture

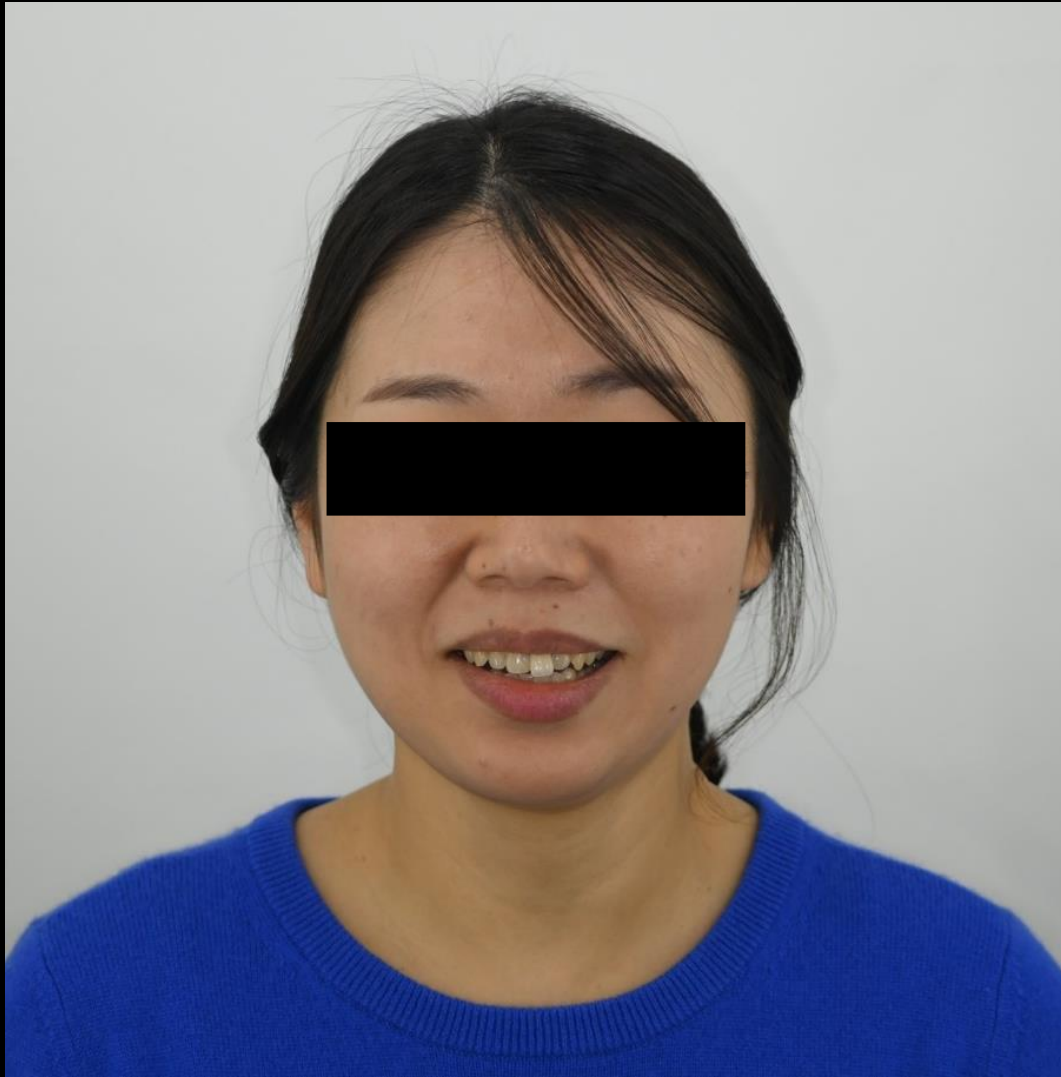


Orthodontically induced root resorption
#12,11,21,22 mob(+)

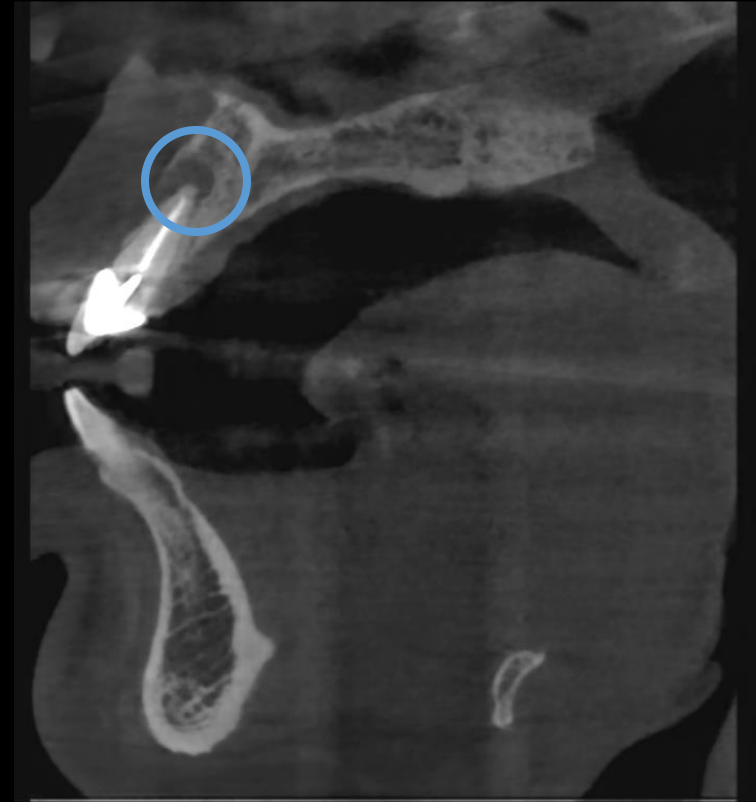
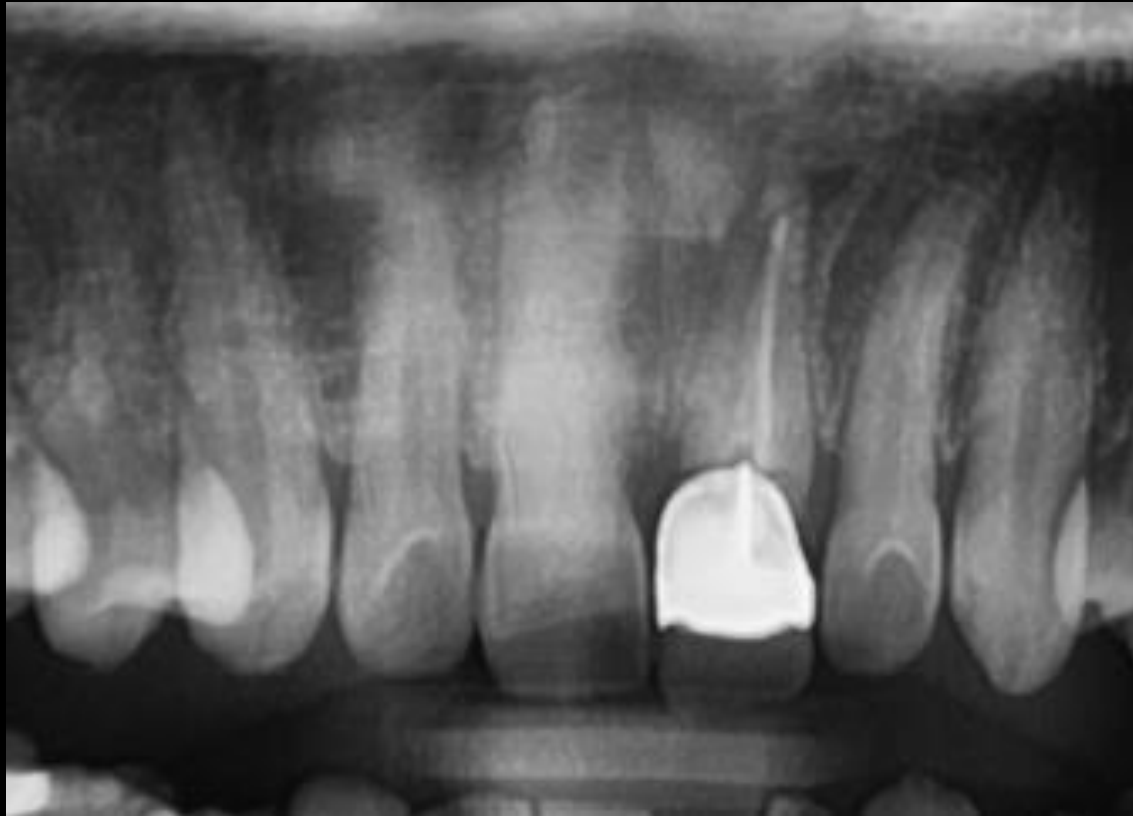
Tx: Direct MINISH restoration on 4 anteriors
without orthodontic extrusion





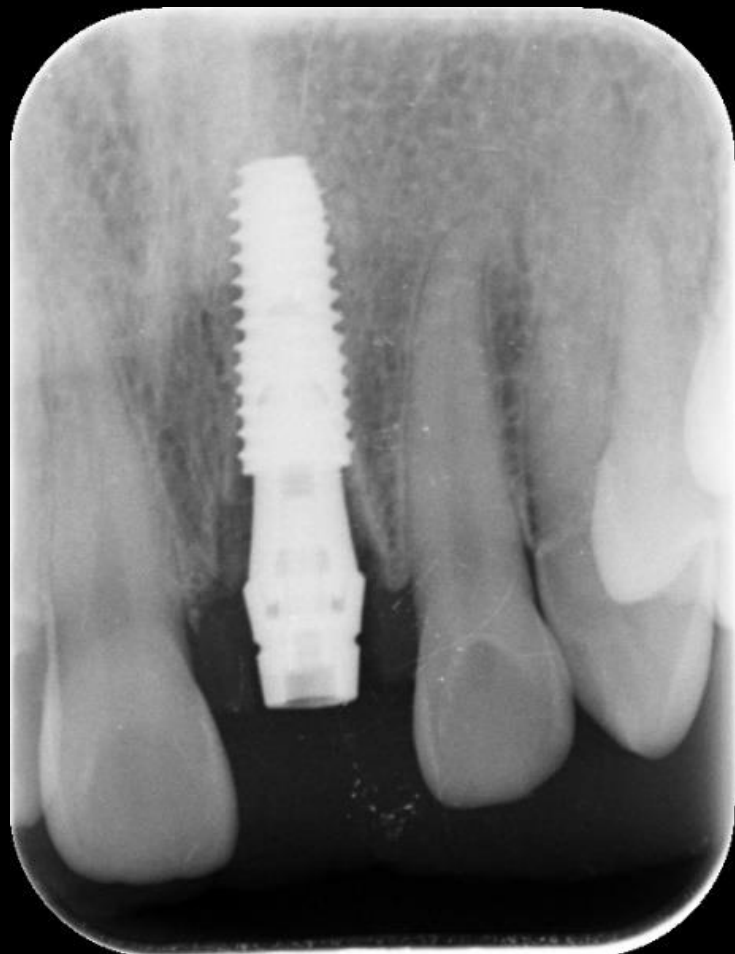


46 / F
#21 extrusion, root fracture



#21 crown/root fracture
periapical lesion
#21 extraction
11 anterior MINISH











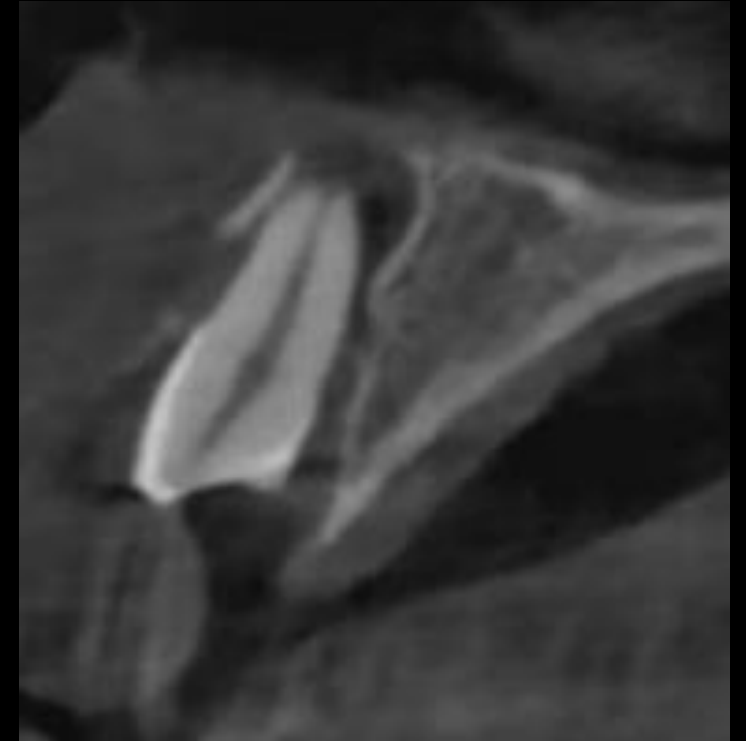






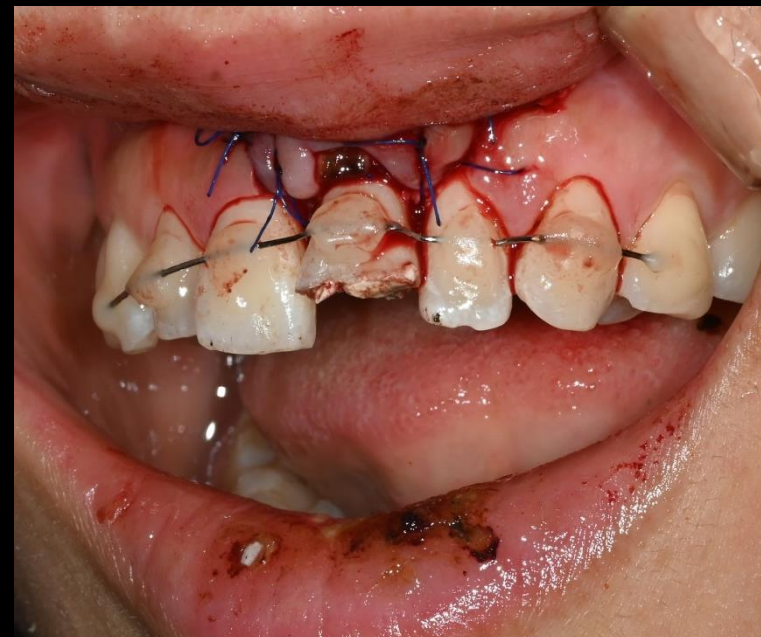
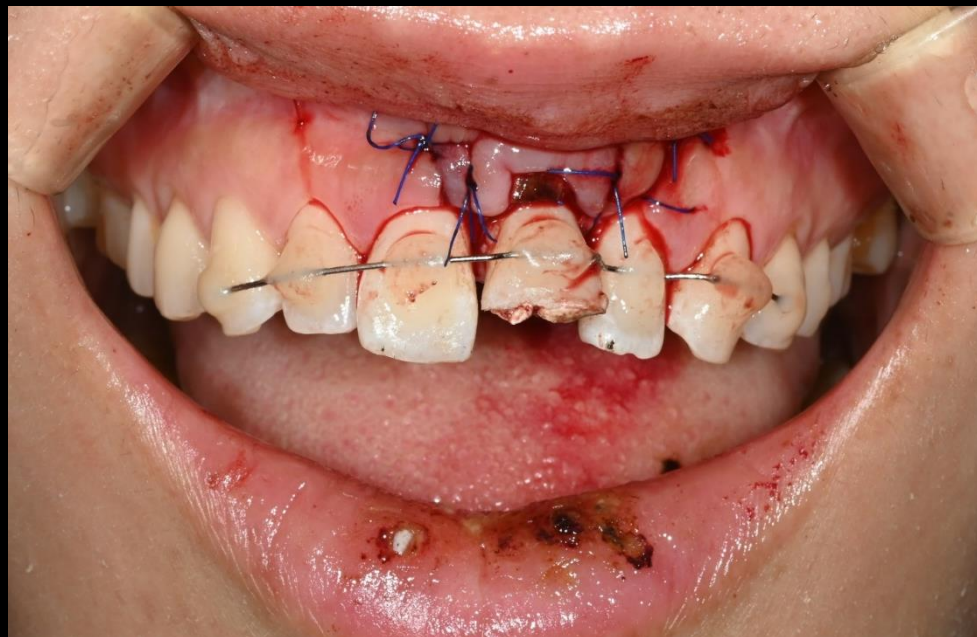
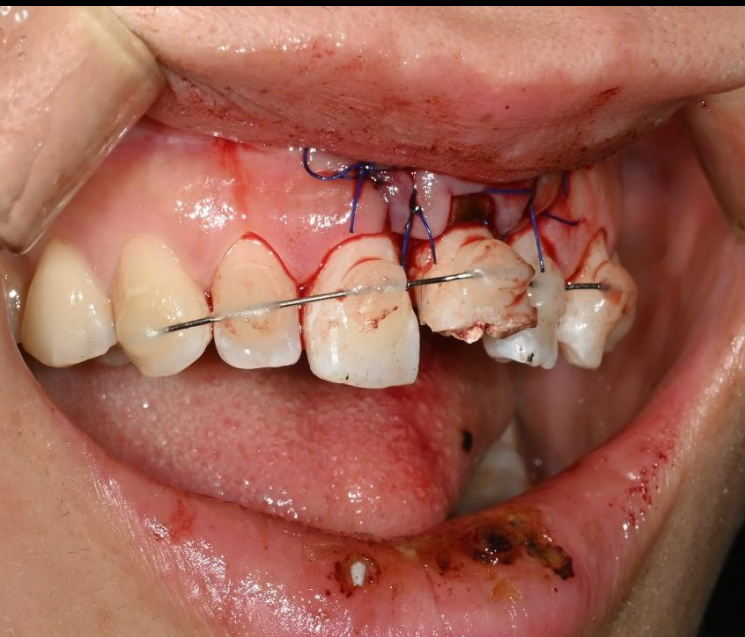


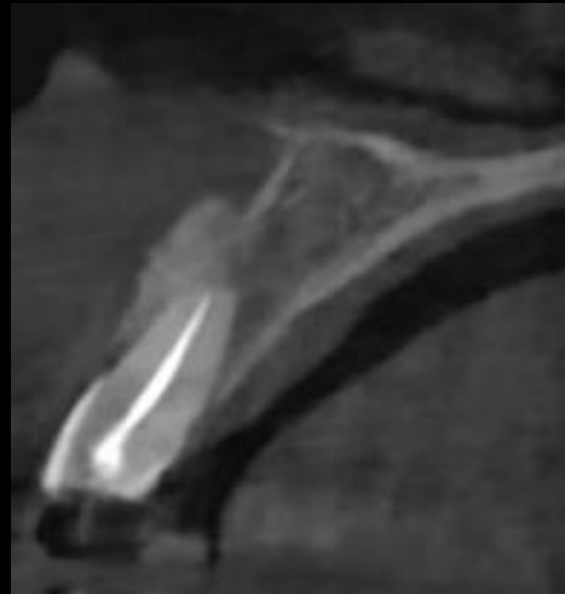
35 / F
#11 subluxation, mob(+)
#21 intrusion, crown fracture



#21 buccal bone fracture
Root canal treatment
Replantation
Buccal bone graft
Wire splint



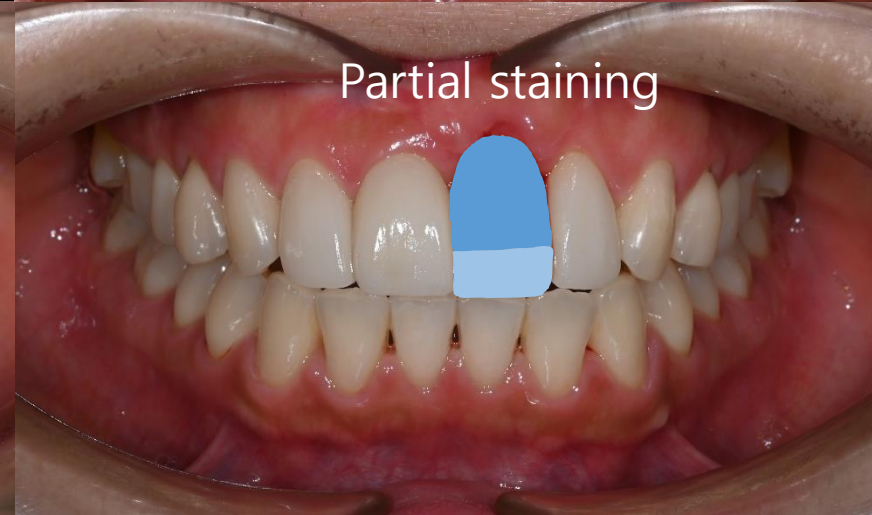
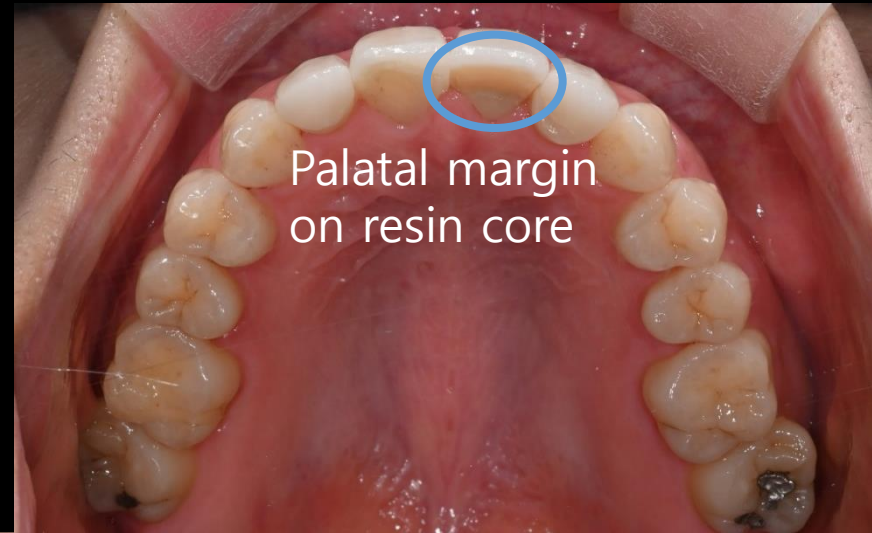


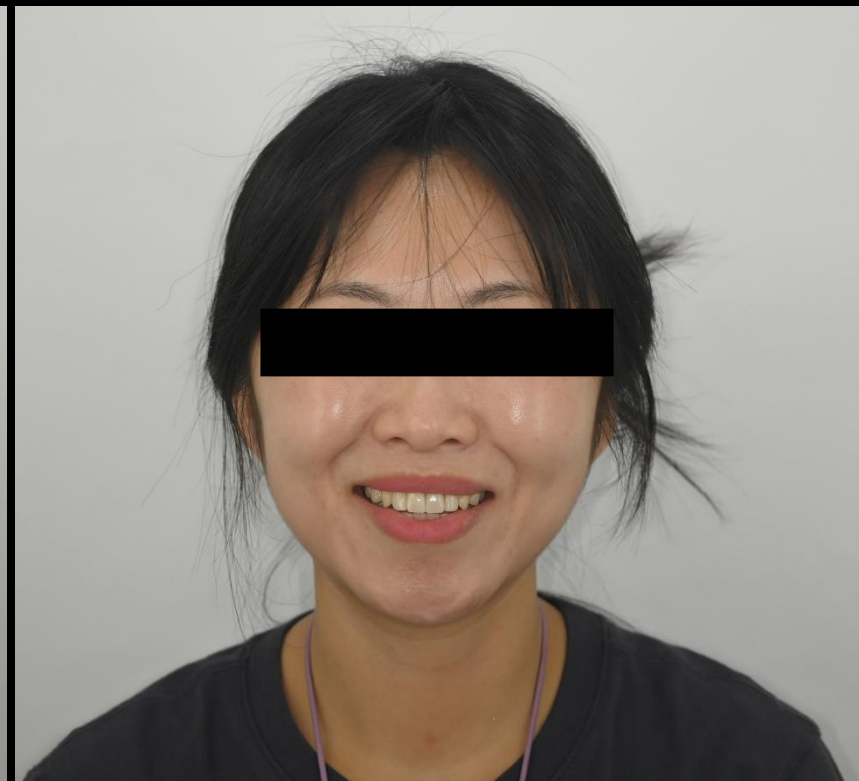


3M f/u
#21 mob (+), bop
#11 ice, hot, per (+)
#11 root canal treatment
4 anterior MINISH

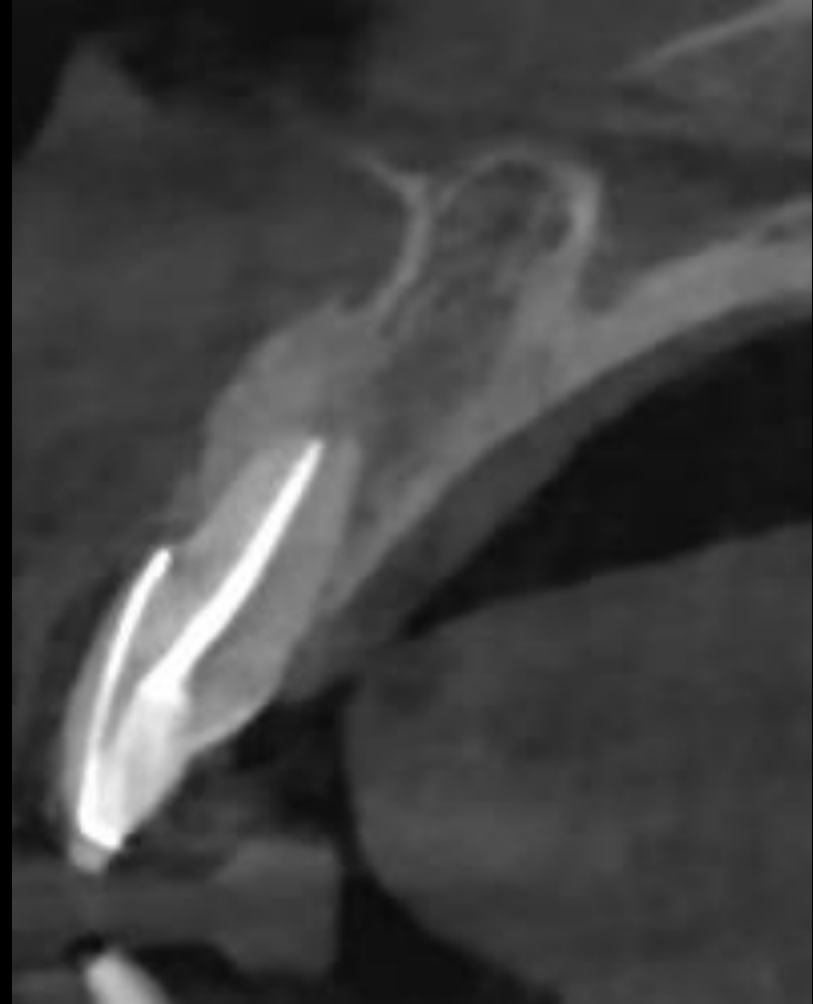








1Y F/U



1Y F/U



#21 mob+, BOP+

Determining the number of MINISH

- Number of teeth affected by trauma
- Patient's expectations
- Assessment of patient status prior to trauma
 - Teeth alignment
 - Dental caries
 - Shade & shape of anterior teeth
 - Occlusion
 - Smile line

Treatment goal depends on the number of MINISH

- 1~4 teeth treated
 - Restore the shape and structure of existing teeth with minor improvement
 - Patient only wants to return to the state before the accident and does not want major changes
- 6~8 teeth treated
 - Improvement of overall smile line and alignment

MINISH prep

- There must be a reason for every preparation
 - Path of insertion (undercut removal)
 - Adjusting shape of tooth
 - Improving alignment / occlusion
 - Achieving tooth shade
 - Convenience during fabricating / setting
 - Treatment plan / goal
 - Avoid unnecessary tooth prep
- The initial diagnosis and treatment plan established through communication with the patient are most important

SUMMARY

- Infraction, Enamel fracture
 - Direct Minish restoration
 - Minimal invasive treatment
 - Better longevity than direct resin
- Enamel / Dentin fracture
 - Resin core on Dentin part
 - Minish restoration on enamel part (covering the margin of the resin core is recommended)
 - Reinforcement, restoration